

*We are currently preparing students  
for jobs and technologies that don't  
yet exist . . . in order to solve problems  
we don't even know are problems yet.*

*We live in exponential times . . . \**

**Promoting the  
science of today,  
for the world of tomorrow**



**SAASTA**  
South African Agency for Science  
and Technology Advancement



# The need to make **scientific disciplines** more **accessible** and **attractive to younger generations** has never been greater.

And this is exactly what the South African Agency for  
**Science and Technology Advancement (SAASTA)** intends to achieve.

As a business unit of the National Research  
Foundation (NRF), our mandate is to:

- steer young minds towards careers in science, technology and innovation;
- interact with the general public on issues of science, engineering and technology (SET); and
- share the advances of science and technology with the public in a way that interests and engages them.

Through our many outreach and awareness programmes, we aim to entice students to pursue careers in science, and to instil in people an enthusiasm and deeper understanding of the

application of science in our every day lives.

But it is more than just a mandate. It is a social responsibility that is closely tied to the priorities of our government, in particular the Department of Science and Technology (DST) and the Department of Education (DoE).

SAASTA is funded by the DST through the NRF, and supports the Department's Youth into Science Strategy. This promotes science and technology literacy among the public in general, and the youth in particular.

# Strategic approach

SAASTA is integrally involved in promoting science at school level, in public forums and in the general media.

These efforts aim to grow the pool of quality science postgraduates who can benefit from R&D funding and support, while also helping to create a more informed population that is better able to debate and decide on issues such as global warming, genetically modified foods, bio fuels, and more.

SAASTA supports all science advancement interventions across the NRF, working closely with the seven National Research Facilities. These focus on the fields of astro/space/geosciences, biodiversity and conservation, and nuclear sciences. SAASTA also works closely with other NRF business units, science facilities, science centres, higher education institutions, science councils and government departments.

All SAASTA initiatives – from its travelling exhibits, science centres and media campaigns, through to

educator and learner programmes – fall under three key strategic areas:

- **Education** (through which we build up the supply of tomorrow's scientists and innovators);
- **Awareness** (through which we engage the public with the phenomena of science, engineering and technology); and
- **Communication** (through which we share science and technology achievements with the public, building up their appreciation of the benefits of science).

These three areas are interdependent, each enhancing the effectiveness of the other, while accommodating different audiences and creating opportunities for joint initiatives across government departments and science agencies.

This multi-layered, integrated approach remains the bedrock of SAASTA's success.

## Why?

Science, through research, has a significant role to play in the growth of South Africa's economy. When scientific research findings are made more accessible to the general public, it is possible for innovation and entrepreneurial opportunities to arise.

Research findings can also have an impact on policy and social conditions in the country, but only when the value and potential of science's role in society is truly understood by the broader public. This can only be achieved when science becomes part of our daily dialogue and discourse.



# Education

South Africa is rapidly reaching the forefront of science and technology advancement and has the potential to become a rich source of scientific expertise – but only if the system is fed with a healthy supply of learners whose interest in SET is guided by equally passionate educators.

SAASTA's education unit therefore implements, develops and manages projects that promote science, engineering and technology to learners and educators based on the following three focus areas:

**School science support:** This includes educator and learner programmes, science enrichment programmes and competitions.

**SET careers:** This comprises career promotional material, role modelling campaigns, job shadowing, SET innovation, and entrepreneurship initiatives.

**Science resources:** This includes curriculum-based support resources, enrichment materials, web-based materials and online learning.



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# Awareness

The wonder of science often only reveals itself when it is presented as something that everyone can see, touch, feel and experience. To this end, SAASTA's awareness unit manages an impressive collection of travelling exhibits and programmes that help to spread the word on science at festivals and exhibitions throughout the year.

The combination of in-house facilities and programmes, outreach and mobile awareness initiatives, as well as events such as INSITE, SciFest Africa, National Science Week and Sasol Techno-X, go a long way towards demystifying science for the public in a way that makes it tangible, practical, and most of all, fun.

The unit runs a Science and Technology Centre Networks programme, which provides support to science centres around the country in the form of human capacity development and training in the design, manufacture and maintenance of exhibitions at these centres.

The awareness unit occupies the Johannesburg Observatory, which hosts exhibitions on engineering, optics, astronomy, astrophysics and space science. It also offers learning facilities such as an infinity room, forensic laboratories, telescope domes and a TRAC laboratory.

Under the curatorship of SAASTA, the Observatory is being considered for development as a centre point for SAASTA's broader education, communication and awareness activities. It is envisaged that it could become a centre of excellence in the sciences, combining educational outreach with hands-on interactivity.

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# Communication

The essence of good science communication lies in providing credible and accurate information that is accessible to all South African communities.

To achieve this, SAASTA's communication unit utilises three critical processes:

- The Scientific Editorial Process (which ensures that information is responsible, reliable and credible);
- Scientific editing (which considers ethnicity and ethnology of target audiences, ensuring that messages are clearly communicated and understood); and
- Audience analysis, with the intention to better understand South Africa's diverse audience

categories by measuring information needs and information seeking behaviour.

The unit has the following focus areas:

- **Science and the media:** This includes media-scientist networking, events and the facilitation of workshops to assist media practitioners and scientists to popularise science.
- **Science promotion:** This includes various communication tools and resources that are used to promote science to the general public, one of the best-known being SA Science Lens – South Africa's only scientific photographic competition.
- **Science communication and capacity building:**

This includes developing the media and communication skills of researchers, enabling them to more effectively share their achievements in priority research areas.

SAASTA has a number of initiatives targeted at the youth to engage them with science and create enthusiasm for school subjects such as science, life orientation and mathematics

Three DST-funded programmes are managed by this unit:

- The Public Understanding of Biotechnology programme (PUB)
- The Public Engagement with Nanotechnology programme (PEN)
- Hydrogen South Africa Public Awareness (HySA).

# Special projects

## Stakeholder programmes

Science councils, research institutes, professionals and the media are all key partners in SAASTA's efforts. These stakeholders remain involved through events such as the biennial African Science Communication Conference, the Southern African Science Communication Network (a free email network for science communicators) and media round tables – interactive media briefings attended by relevant science specialists.

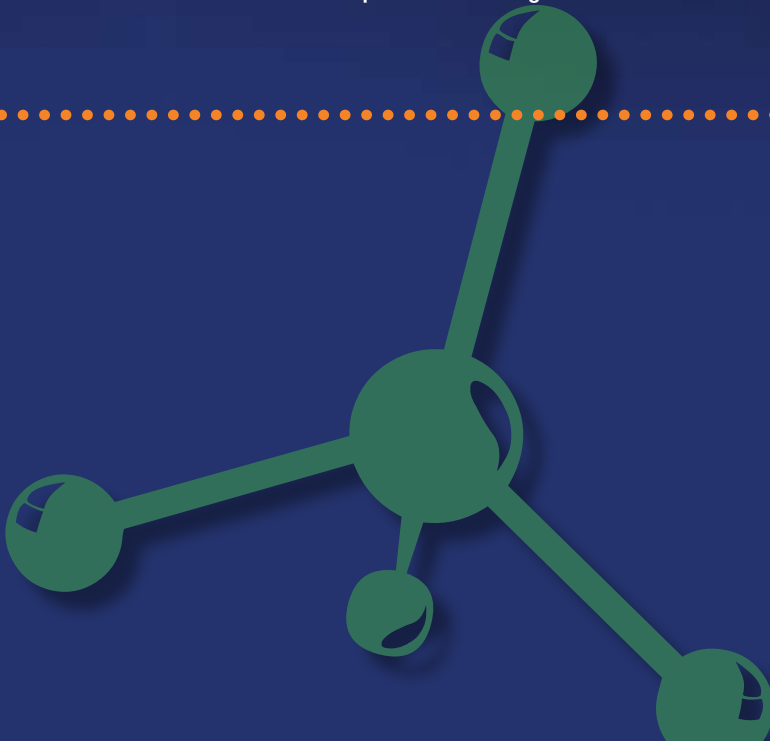
## Educator programmes

SAASTA'S mandate includes supporting educators so that they are able to deliver quality teaching in science, mathematics and technology. This includes resource materials such as printed manuals, and the Science Teachers' Forum – an open forum through

which teachers meet to share ideas and discuss issues encountered in the classroom.

## Youth programmes

SAASTA has a number of initiatives targeted at the youth to engage them with science and create enthusiasm for school subjects such as science, life orientation and mathematics. One of the best established of these is the National Science Olympiad, a competition that has been running for more than 45 years, aimed at Grade 10 to 12 learners in physical science and biology. Initiatives also include Primary Science Day, national school debates, the Astronomy Quiz, the Young Science Communicators Competition and National Science Week, which SAASTA manages on behalf of the DST.





# Contact us

Tel: +27 (0)12 392 9300

Fax: +27 (0)12 320 7803

Email: [info@saasta.ac.za](mailto:info@saasta.ac.za)

Web: [www.saasta.ac.za](http://www.saasta.ac.za)

Didacta Building, 211 Skinner Street, Pretoria, South Africa

PO Box 1758, Pretoria 0001

