



**ASTEMI**

SCIENCE TECHNOLOGY ENGINEERING  
MATHEMATICS INNOVATION

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OLYMPIADS & COMPETITIONS

# ASTEMI BROCHURE

promoting Olympiads and Competitions in the areas of

**SCIENCE | TECHNOLOGY | ENGINEERING |  
MATHEMATICS & INNOVATION**

# Olympiads & Competitions at work for you

Inspiring the next generation of scientists

## A WORD FROM THE SPONSORS

*The need to make scientific disciplines more accessible and attractive to younger generations has never been greater. South Africa has the potential to become a rich source of scientific expertise, but only if the system is fed with a healthy supply of school-going youth who are interested in and enthusiastic about science, technology, engineering, mathematics & innovations (STEMI).*

*The Department of Science and Technology (DST) believes that science, technology, engineering, mathematics and innovation (STEMI) Olympiads and competitions are excellent ways to create enthusiasm for school's subjects such as the sciences and mathematics. Competitions also create awareness among the youth of careers in science, engineering and innovation and assist to steer bright young minds into these careers.*

*Close to 200 000+ learners participate annually in STEMI Olympiads and competitions in South Africa. Many more participants are required from township, rural and peri-urban areas to increase the numbers of talented young people being identified and encouraged to follow science-based study options after completing matric.*

## ASTEMI

The DST supports ASTEMI, the Association of Science, Technology, Engineering, Mathematics & Innovation Olympiads and Competitions, which was formed in 2016. The support provided to the Olympiads and competitions forms part of the 'Youth into Science Strategy' which has the strategic goals of promoting science among the public and the youth, as well as the identification and nurturing of young people with talent and potential to follow a career in science.

## MISSION STATEMENT

### **To use Olympiads and Competitions:**

- To contribute to high-quality STEM education for all school learners from Grades R-12.
- To assist in identifying and nurturing talent of promising young South Africans and to encourage them to pursue careers in science, technology, engineering and mathematics.
- To encourage as many schools as possible to achieve excellence in STEM.
- To help instil a passion for teaching and learning of STEM subjects.
- To encourage learners to become potentially more employable.



the association of Science Technology Engineering Mathematics & Innovation

# ASTEMI

ASTEMI is a collaboration that brings organisers of STEMI Olympiads & Competitions together to expand Olympiads & Competitions to a broader base of learners and educators



## WHO IS ASTEMI?

ASTEMI is a national non-profit organization of independent organizations; teachers, public organisations and volunteers dedicated to improving and promoting science education and providing recognition for outstanding achievement by both learners and teachers.



To promote excellence in Science, Technology, Engineering, Mathematics and Innovation in South African schools



## OLYMPIADS & COMPETITIONS

Mathematics and science Olympiads and Competitions, together with the people and organizations' engaged with them, form an important part of a national network. Each individual organization's Olympiads and Competitions have a unique way of identifying, motivating developing and steering young talent towards careers in science. All these Olympiads and Competitions have a positive impact on education and on educational institutions in South Africa, but there is still a need to build stronger collaboration among teachers, schools, universities and educational authorities in order to meet the challenges of STEM education in South Africa today.



## PROMOTING AWARENESS

The phrase "*Olympiads and Competitions*" embraces a wide range of activities that normally take place outside the formal school curriculum. These include:

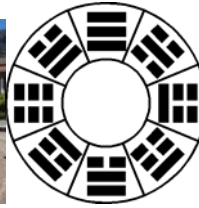
- Local, regional and national competitions with thousands of entries.
- Multi-level events of two or more rounds that become increasingly challenging and culminate in top-level Olympiads.
- Enrichment programmes to inspire promising young South Africans to pursue STEMI careers.
- Talent searches and similar programmes to select and train national teams to represent the country in international events.
- Organisation of international Olympiads in South Africa.

ASTEMI brings together all role players in the field of Olympiads and Competitions – including professional and academic societies, universities and other tertiary institutions, private enterprise and government – to promote, coordinate and extend STEMI Olympiads in South Africa.

## OLYMPIADS & COMPETITIONS COVERED IN THIS BROCHURE

1. The University Of Cape Town Mathematics Competition
2. South African Physics Olympiad
3. The World Robot Olympiad
4. The Living Maths Mathematics Olympiad
5. Conquesta Primary School Olympiads
6. Imbewu Science Foundation
7. Eskom Expo For Young Scientists
8. FEMSSISA
9. South African Science Olympiads
10. Computer Talent Search
11. Computer Programme Olympiad
12. Computer Applications Olympiad
13. South African Mathematics Olympiad
14. South African Mathematics Challenge
15. Siyanqoba Regional Olympiad Training Programme
16. Olympiad Training Programme
17. Teacher Problem Solving Course
18. Sasol Techno X
19. First Robotics
20. NZG Life Sciences Competition
21. Nano Quiz
22. Gear Competition
23. Robotics And Rockets Olympiad
24. Geography Olympiad
25. Minquiz
26. Famelab® South Africa
27. National Science Olympiad™
28. Natural Science Olympiad®
29. South African Science Lens Competition®
30. Young Science Communicators Competition®
31. AstroQuiz®
32. National School Debates™

# THE UNIVERSITY OF CAPE TOWN MATHEMATICS COMPETITION



## Background

The UCT Mathematics Competition is an annual event which began in a local school in 1977, and moved to UCT in 1980. It currently attracts about 7500 entries from 170 schools in the Western Cape.

The objectives of the competition are:

- to popularise mathematics
- to raise awareness among both students and teachers that mathematics is a subject that is enjoyable and accessible to everybody
- to identify promising students and offer them opportunities for further development of their mathematical talents
- to attract students to study mathematics at UCT.

## Entry requirements

All high schools in the Western Cape are invited to participate. Each school may enter five individuals and five pairs in each grade (8 to 12). Entries by schools is done online. **Entry is free.**

## Host

The University of Cape Town

## How it works

Five question papers are set, one for each grade. The papers are multiple-choice, consisting of thirty questions, ranging from very easy to rather difficult.

The papers are written at the University of Cape Town campus on an evening in April. Pairs and individuals write the same paper, but their results are graded separately.

## Awards

The top ten individuals and top three pairs in each grade win Gold Awards and calculators or watches donated by Casio.

If a school does not qualify for a Gold Award, but has entered at least ten individuals, it qualifies for a School Award; a book donated by Oxford University Press. The School Prize is awarded to the individual with the highest ranking (in any grade) in the school.

These prizes, and several trophies for individual and school achievement, are awarded at a prize-giving in late May or early June.

Merit Awards are given to the top 200 individuals and top 100 pairs in each grade. All other contestants receive Certificates of Participation. Full results and appropriate certificates are sent to schools after the prize-giving.

## The UCT Mathematics Challenge and Olympiad

The top achievers in the Competition are invited to take part in a second round; the UCT Mathematics Challenge. The papers require only numerical answers.

The top achievers in the Challenge are invited to take part in a third and final round; the UCT Mathematics Olympiad. The Junior and Senior papers consist of six problems, for which full solutions are required.

## Sponsors

The Old Mutual, Casio, Oxford University Press, j5 International and SAASTA.

For more information, contact:

**Professor John Webb**

| Tel: 021 650 3193 | Email: john.webb@uct.ac.za |

**Mrs Anthea Willis-Thomas**

| Tel: 021 650 3193 | email: anthea.willis-thomas@uct.ac.za

Website: [www.math.uct.ac.za/mam/outreach/competition](http://www.math.uct.ac.za/mam/outreach/competition) |

# SOUTH AFRICAN PHYSICS OLYMPIAD, SAPHO



## Overview

Physics underpins all sciences, so no matter what science one wants to study, Physics will be an important part of that. The International Year of Physics in 2005 had the aim of raising the awareness and importance of Physics, and a spin-off from this was the launching of the South African Physics Olympiad, SAPHO. Today it attracts entries from across South Africa and neighboring countries.

The main objectives are to:

- identify students with ability in Physics
- raise the awareness of Physics
- to show how Physics impacts on our daily lives
- encourage students to study Physics

## Entry Requirements

Students who do well in other National Physical Science Olympiads are selected and invited to write the SAPHO. **Entry is free.**

## Host

The South African Institute of Physics (SAIP)

## How it works

This is an online exam and procedural details will be sent to the invited learner's school well in advance. On the morning of the exam, the log-on details are sent to the school whose learners have been invited to write SAPHO. The paper consists of 50 multiple-choice questions, with five alternatives and is to be completed in 90 minutes. It covers Physics that is in the CAPS curriculum **and beyond**.

## Awards

Winner receives the SAIP Medal, a Gold Certificate and a prize, whereas, second place receives a Silver Certificate and a prize and third place receives a Bronze Certificate and a prize. Merit Certificates are awarded to those who score lower than third place but higher than 60% and Honourable Mention Certificates are awarded to those who score between 60% and 50%. All others receive Certificates of Participation. The top three are invited to the Annual SAIP Conference Gala Dinner where they are awarded their prizes.

## Competition Timelines

SAPHO is written on the first Monday afternoon of the National Science Week each year (July or August).

## Supported by

SAIP, SAASTA and the National Institute of Theoretical Physics, NITheP.

## For more information, go to:

**Convener:** Case Rijsdijk

Tel: 044 877 1180 | e-mail: [particles@mweb.co.za](mailto:particles@mweb.co.za)

Website: [www.saip.org.za](http://www.saip.org.za)

**Project Manager:** Ndanganeni Mahani

Tel: 012 841 2655 | e-mail: [ndanganeni.mahani@saip.co.za](mailto:ndanganeni.mahani@saip.co.za)



# THE WORLD ROBOT OLYMPIAD



## Background

The World Robot Olympiad is a global LEGO Mind storms Robotics Competition. This event combines the world of Science, Engineering, Technology and Education. It brings together young people from all over the world to develop their creativity, design and problem-solving skills through challenging robotics competitions and activities.

## Entry requirements

Teachers/coaches will enter teams of two or three learners into the annual competition via the website [www.wrosa.co.za](http://www.wrosa.co.za)

The specified age groups for Regular and Open category are 7 to 12 years for Elementary, 13 to 15 for Junior and 16 to 19 for Senior. WRO Football is for 10 to 19 years old and Advanced Robotics Category is for 17 to 25 years old.

## Host

WRO World Robot Olympiad is managed and coordinated by Hands On Technologies as the approved custodian in South Africa [www.handsontech.co.za](http://www.handsontech.co.za)

## The benefits include:

- Provide students an opportunity to expand their horizons through exploration of robots, coding and robotic systems in and out of school.
- Introduce the concept of modern science into school's educational activities in science and technology.
- Provide an opportunity to promote creative thinking, improve communications and co-operation skills, plus strengthen the ability to acquire new knowledge highly relevant towards progressive education.
- To widen the youth's view in the application of science & technology, improve their learning efficiency & encourage participation inspiring our future scientists, engineers and inventors.

## Target

7 to 19 year olds from schools or home scholars and private robotics clubs.

## How it works

WRO International, in collaboration with the selected host country, present an educational theme and the age-related challenges for that year. Teams prepare for about 4-5 months designing, building and programming a robot to complete the challenge with maximum score in the shortest possible time.

Teams enter and participate in provincial WRO competitions and then qualify to attend the National WRO.

## Cost

Entry fees may vary depending on sponsorship.

## Awards

Participants receive participation certificates and winners receive certificates and medals per their placing. Winners receive a LEGO WRO floating trophy, can represent South Africa internationally and can be awarded National colours.

## Competition timelines

The challenges and rules are released in February, Provincials run in July/August and the National WRO in early September.

The International Competition is hosted annually by a different country in mid-November.

## For more information, go to:

[www.wroboto.org](http://www.wroboto.org) | [www.handsontech.co.za](http://www.handsontech.co.za) | [www.wrosa.co.za](http://www.wrosa.co.za)

# THE LIVING MATHS MATHLETICS OLYMPIAD



## Overview

The Living Maths Mathletics Olympiad was started in 2000. It caters for students from Grade R up to Grade 9. It offers content that matches the CAPS curriculum and additional content that encourages critical and analytical thinking. The Olympiad was started to offer students and teachers the opportunity to engage with problem solving in both a fun and challenging way. Our Olympiad caters for the whole grade, but does offer bonus questions for the advanced students. The Olympiad allows us to identify talent, share resources with teachers, encourage students to engage with maths and teachers often use our Olympiad for assessment purposes.

## Entry requirements

Schools, Centres, Home-schools and individuals can enter. Students can participate as individuals or in pairs.

## Host

Living Maths creates, facilitates and processes the entire Olympiad.

## Benefits

Students are encouraged to participate in this Olympiad simply because the questions are engaging and promote discussion around topics in maths. The strongest students will be challenged with the broad range of bonus questions. We are looking to identify talented students.

## Target

Grade R - 9 students from schools based in South Africa and around the world. We might be adding grades 10-12 in the future.

## How it works

A Google folder contains all the Olympiad papers, memos, instruction sheets and notices. Any school that is interested in taking part needs to contact us to join our Olympiad mailing list. We will send you the link and you have about 1 month to write the Olympiad – allowing for flexibility. Schools print the papers and mark them. They then send us the top three results in the pairs and top three results in individual's categories in each grade. We then collate the results and send out certificates and prizes to the top students in the country.

## Cost

A voluntary fee of R5 per student. No student is declined for non-payment!

## Awards

Each student is issued with a Certificate of Participation which is provided to the school in the Olympiad Google Folder. The top students in the country receive special certificates from Living Maths and a SHARP Calculator.

## Geographical footprint

Students take part from around the whole of South Africa, SADC, Africa, USA, UK, Australia, Greece, Germany, etc. All schools are welcome to take part and we would love to reach more cities in South Africa and countries around the world.

## Competition timelines

The Olympiad takes place around the middle of October until the middle of November each year.

**For more information, go to:**  
Olympiad Convener: **Steve Sherman**  
(083) 308 3883 | [steve@livingmaths.com](mailto:steve@livingmaths.com)  
Website: [www.livingmaths.com](http://www.livingmaths.com)



# CONQUESTA SCHOOL OLYMPIADS



## Background

Conquesta Primary School Olympiads was started in 1998 by Lillian Hoogervorst as an external activity for primary school children, from all walks of life, in all the provinces of South Africa, as well as neighbouring African countries – so that ALL children, no matter what their academic abilities, have an opportunity to be encouraged by the excitement of participating in an external Olympiad and being rewarded for same. Conquesta Olympiads are multiple choice question papers which challenge learner knowledge in the various subjects on offer (like a written quiz). New papers are written each year. Past papers are available for revision, both at home and in the classroom.

The Olympiads do not interfere with the school's curriculum nor with the examinations. Learners can participate in all or any number of the Olympiads. All exam papers are CAPS compliant. **Robotics for grades 6-9 will also be offered from 2019**

## Entry requirements

All learners, **regardless of their academic capabilities**, should be given the opportunity to participate. Our entry forms can be downloaded from our website at [www.conquestaolympiads.com](http://www.conquestaolympiads.com) or you can contact us and we will email you an entry form. Class lists may be submitted in the place of entry forms if all learners in the same grade are writing the same subjects. Entries need to reach us by our closing date each year – usually at the end of April, latest end of May.

## Host

Conquesta Olympiads are coordinated by Conquesta. The schools invigilate the Olympiads on the given dates. Please note that **no teacher training is required**.

## Benefits

- Every child can be exposed to the excitement of participation in an external Olympiad. The layout of our papers is set to encourage rather than disenchant, and are aimed at learner participation and enjoyment.
- In time for year-end prize giving, EVERY participant will receive an A4 colour certificate, no matter what their results. The school also receives a certificate reflecting the average achievement, calculated from the top 10 results in each subject/grade.
- Educators can measure learners' abilities against the national and international averages (computed from participating schools).
- The **Results List**, which participating schools receive together with their **certificates** at the end of October each year, reflect each child's results and the school's averages by grade and subject.
- The **national averages** are posted on our website early the following year.
- **Top Learner Achiever Lists** will also be provided for every subject from Grades 4-9. These will list the learner names and the schools that they attend and will be posted on our website at the end of every year

A separate listing of statistics for grades 4 – 7 Mathematics, Science & Technology is also provided to enable schools to assess their strengths and weaknesses in these subjects by grade and learning area. These are called MLA, SLA and TLA reports.

- We have many years of past papers available, which can be used to prepare the learners for the Olympiads, as well as for use in the classroom throughout the year. These past papers can be ordered online at [www.conquesteapastpapers.com](http://www.conquesteapastpapers.com), or you can contact Hazel Raath at our office (031) 764 1972

## Target

Conquesta Olympiads are open to every single learner, from grade 1 through to grade 7, in South Africa and neighboring countries (Namibia, Botswana and Swaziland).

## How it works

**We supply everything** by door to door courier service, and there is minimal work or expense from the school's side. For schools collecting finance from parents, we provide a **typed letter to parents** for you to copy and send home with the learners, so they can select subjects and collect finances. Just follow the simple **Procedures**, which will be provided. Exam papers are couriered to participating schools towards the end of July each year. We provide personalized exam papers for grades 1-3 and personalized answer sheets with exam papers for grades 4-7 – for every participating learner. All the simple instructions are included. Educators only need to invigilate each Olympiad on the given date. At the end of the final Olympiad, all the grade 1-3 papers and grade 4-7 answer sheets are to be returned to Conquesta for marking. We mark the papers and then courier certificates and results back to the school by end of October, in time for the end of year prize giving.

## Cost

R18 once-off registration fee for each learner, plus R16 per learner for each subject being written.

## Awards

The schools and every learner receives a certificate. (See 'What is the Benefit?' above.) Schools can compare their results to the national averages. Schools receive reports (refer to 'What is the benefit?' above.) Schools, who meet the criteria of number of participants, are automatically included in our Top 20 calculations. We have had learners from the poorest and most remote areas, who have shone and brought their schools into our prestigious Top 20. (See Top 20 schools on our website.)

## Competition Timelines

The exams are written in August (for 4 Term Schools) and in September (three term schools) every year.

For more information, contact:

Melanie Mengel or Hazel Raath on (031) 7641972 | [conquest@iafrica.com](mailto:conquest@iafrica.com) | Website: [www.conquestaolympiads.com](http://www.conquestaolympiads.com) | Project Coordinator: Lillian Hoogervorst. 9

# IMBEWU SCIENCE FOUNDATION



## Background

We offer an Integrated Pathway to Science Excellence where we have an outreach programmes to Gr 5 & 6 learners, establish science clubs in communities from Gr 7-11 and offer science fairs and other STEMI challenges to high school learners. We provide industry the opportunity to connect with and mentor our future scientists.

## Entry requirements

Schools can contact us for our outreach programmes throughout the year while schools and individuals can enter the Northern Gauteng and Northern Cape Science Fairs held in August each year.

## Host

IMBEWU Science Foundation

## Benefits

Learners in Gr 5 and 6 learn to apply the scientific method in hands-on science experiments, while Gr 7-11 in the science clubs learn more in customised STEMI curricula. The Science Fairs give learners the opportunity to compete on a regional and national level with their peers. The best projects are given the opportunity to compete internationally.

## Target

Grade 5-11 learners from schools based in South Africa.

## How it works

The outreach programme: Contact us to hold a series of workshops in your school to Gr 5 & 6 where they will learn to conduct simple hands-on science experiments using the Scientific Methods. A school show-and-tell competition is then held where the kids with the best projects compete with other schools in the same region. Gr 7 -11 learners contact us to start a new science club in their community, or work with an existing science club which will run STEMI projects. There we identify individuals and small groups to mentor and help them to develop their passion in STEMI, compete in provincial science fairs and expose them to relevant careers. They can also compete in national and international competitions with the mentoring of academics and experts from the industry.

## Cost

Outreach programmes are sponsored, while the provincial, national and international science competitions might have an associated cost of between R50 – R100 entry fee. However, we aim to sponsor worthy candidates.

## Awards

Exposure to mentors, while certificates and medals are handed at the science fairs.

## Competition timelines

The school science fairs take place throughout the year, while the regional science fairs usually take place in August. The national competition takes place in October of each year.

For more information, contact:

National Director: Marna van Zyl | 082 923 1711 | [marna.vanzyl@imbewu.foundation](mailto:marna.vanzyl@imbewu.foundation) | [www.imbewu.foundation](http://www.imbewu.foundation)

# ESKOM EXPO FOR YOUNG SCIENTISTS



## Background

Eskom EXPO for Young Scientists (EXPO) is a practical, “grassroots” and higher-level enterprise that engages young people in project work in Science, Technology, Engineering, Mathematics and Innovation (STEMI). It is well positioned to develop the inquiring mind of the youth using research to ignite passion around science among our learners.

## Entry requirements

Grade 5 to 12 – Regional level & Grade 6 to 10 – National level

## Host

Eskom Expo for Young Scientists

## Benefits

- Learners with innovative and original projects have the chance of being selected to represent South Africa at International Science Fairs.
- Explore your scientific career from one of the twenty-four categories offered by Eskom Expo for Young Scientists.
- Many past winners have furthered their careers in science based on the projects they submitted to the Eskom Expo for Young Scientists.
- Win participation certificates, medals, cash, laptops etc.
- Win fantastic prizes for your school and yourself.

## Target

EXPO functions at all levels ranging from the individual student in the classroom to the provincial education departments, and spreads out to tertiary education institutions, commerce and industry.

## How it works

Learners can enter their own individual projects, or a maximum of two learners can work together on a paired project. Learners may enter one project in one Eskom Expo region per year. There are 24 different categories in which a project can be accommodated.

## Cost

Please contact your nearest region as the registration fees varies from each region. (Refer to website address below.)

## Awards

By participating in Eskom Expo, learners will increase their awareness of the wonders of science and engineering, add to their knowledge and explore entrepreneurial possibilities, while broadening their scientific horizons. A variety of prizes such as certificates, medals, cash and laptops are awarded, among others.

## Competition timelines

Regional Expos – July to September (35 regions)

Eskom Expo International Science Fair - October

For more information, go to:

Rancia Riba | Email: [admin@exposcience.co.za](mailto:admin@exposcience.co.za) | Tel: (011) 894 1365 | [www.exposcience.co.za](http://www.exposcience.co.za) 11

# FEMSSISA



## Overview

FEMSSISA (Foundation for English; Mathematics; Sciences; Sports and Innovation of South Africa) is a registered Non-Profit Company and has been operating since 1998.

## Entry requirements

The Mathematics Olympiads from grades 1 to 11 is a two round Olympiad. The first round is multiple choice and the second round is open ended. It is an individual contest. Only learners who qualify are entered in the final round. The qualification mark is 35%. The entry fee for the final round is R10 per participant.

## Host

FEMSSISA. FEMSSISA also network with other hosting organisations namely, Thinking for Success, and Space Age Independent School in Gauteng.

## Benefits

Educator empowerment; learn problem-solving skills and strategies; identify talent; nurturing of talent; positive impact on the economy of this country; and enables learners to make wise career choices.

## Target

All learners doing Mathematics from grades 1 to 11; educators teaching mathematics; parents; Department of Education and other relevant stakeholders.

## How it works

FEMSSISA organizes a two round Olympiad from grades one to eleven. The first round is multiple choice paper whilst the final round is open ended. A nominal fee will be charged for the first round. The mathematics Olympiads are grade specific. The Olympiads are at 3 levels: routine curriculum problems; enrichment and challenging non-routine problems. Certificates and medals are awarded. Certificates are awarded in 4 categories: Gold; Silver; Bronze & Final Round Qualifier. Historically disadvantaged learners are given a concession. Qualification into the final round is 35%.

## Cost

The first round carries an entry fee of R5. Second round (final round) qualifiers pay R10.

## Awards

The opportunity to write Mathematics Olympiads of a good standard.

## Competition timelines

Primary: Grades 4-7 First Round End of May | Junior High: Grades 8-9 First Round End of May

Senior High: Grades 10-11 First Round End of May |

Foundation Phase: grades 1-3 First Round Beginning of August

Primary: Grades 4-7 Final Round End of August | Junior High: Grades 8-9 Final Round End of August

Senior High: Grades 10-11 Final Round End of August |

Foundation Phase: grades 1-3 Final Round Beginning of October

# SOUTH AFRICAN SCIENCE OLYMPIADS



## Overview

The South African Science Olympiads in Natural, Life and Physical Sciences were initiated in 1997 at the Springfield College of Education. The competitions were started in partnership with and under the guidance of the South African Science and Technology Educators (SAASTE-KZN).

There are 10 grade-specific Olympiads exams and they cater for:

- Natural Sciences – Grades 4, 5, 6, 7, 8 and 9
- Life Sciences – Grades 10 and 11
- Physical Sciences – Grades 10 and 11

## Entry requirements

Entry forms are posted to many schools and/or sent via email to schools. Entry forms are sent via email to all MST coordinators in Provinces. Entry forms and other information are available on our website.

## Host

Final Round Olympiads are written at Schools in August. Free Practice Round – printed, written and marked at School in March. Final Round papers are posted to school, answers returned by registered mail to organisers and marked by organisers

## Benefits

Every learner can gain access to hundreds of revision questions free. The final round Olympiad exams will give talented and gifted learners an opportunity to compete with other learners nationally. All the top three groups of learners and schools per grade are given awards at the National Awards function.

## Target

All learners from Grades 4 to 11. Grade 3 could also write the grade 4 papers.  
All Teachers, Schools and MST in Southern Africa.

## How it works

Organisers set papers and post to schools via registered mail in July. Exams are written in schools in August and the answer sheets are returned to us. Results together with the certificates and Awards invitations are sent to the schools. Awards function held in November. Some students are short-listed for the IJSO, IBO, IPHO and ICHO – provided with guidance and advanced study material in December. Training are also provided. Selection tests are written in January/February – teams selected for the international. Selected students are provided with some training by specialists (teachers/lecturers). Learners represent SA in December or July in the International Olympiads.

## Cost

Olympiads are open to all learners from any School or Province in Grades 4 to 11 in Natural, Life and Physical Sciences with an entry fee of R20 per learner.

## Awards

The best Grades 9, 10 and 11 learners are short-listed for selection – write a selection test and may then be selected to represent South Africa at the International Olympiads. Platinum Certificates (90%+), Gold Certificates (80% -89%), Silver (60% -79%) and participation certificates (rest) are awarded to all learners. The Top three schools per grade and the top three Educators per grade are also given awards.

## Competition timelines

Schools complete entry forms per grade in duplicate and post to us together with proof of payment by June. Closing Date for Entries: 31 May; Late Entries up to 30 June.

# COMPUTER TALENT SEARCH



## Overview

**TALENT SEARCH:** To cater for a wider audience, a new round, an aptitude test called Talent Search, is offered. Schools are using it to identify learners who should be taking IT and CAT, but also Mathematics and Science.

## Entry requirements

Schools enter learners. While selected learners can be entered by their schools, it is more beneficial if entire classes are entered. The intention is that the contest is offered to entire classes or grades not only to identify talented learners, but to develop computational thinking in all learners. Only by entering entire classes will teachers be able to make full use of the Teachers Guide issued after the event.

## Host

South African Computer Olympiad Trust.

## Benefits

The Talent Search challenges learners to use what they have learned in ways they may never have been taught and to develop computational thinking.

## Target

Schools enter their learners. Learners from Grades 6 to 12 must use computational thinking to solve 15 problems, or 10 problems for Grades 4 and 5 (Elementary).

## How it works

Schools select the age groups to take part (could be all). Schools select online or pen-and-paper (or both). Schools select English or Afrikaans (or both). In the case of online participation, the Computer Olympiad office will send the required number of logins for the number of learners entered. The Olympiad computers do the marking (no marking for the teacher) and the results are sent to schools. Pen-and-paper results are marked by the teacher (easy - just tick, tick, tick) and the results are sent to the Computer Olympiad office to add to the national results.

## Cost

Entry is free. To encourage all schools to enter, there is no entry fee. The Trust works closely with partners and volunteers to provide the support, backing and energy to deliver this service.

## Awards

Gold, silver and bronze certificates issued in the name of learners, are sent to schools for learners who achieve in the top 50% of their age group nationally.

## Competition Timelines

One week in **March** each year.

## Geographical Footprint

All nine provinces of South Africa.



# COMPUTER PROGRAMMING OLYMPIAD



## Overview

**PROGRAMMING:** The South African Programming Olympiad is one of the oldest and biggest coding events of its kind in the world. It started in 1984 when it became a project of the Institute of IT Professionals South Africa (then known as the Computer Society of SA). It is the only programming competition nationally. In 2017 there were 6 708 entries from 228 schools, but relatively few from historically disadvantaged backgrounds.

## Entry requirements

Learners must know how to code / write computer programs. While selected learners can be entered by their schools, it is more beneficial if entire classes are entered. Only by entering an entire IT class will teachers be able to make full use of the Teachers Guide issued after the event.

## Host

South African Computer Olympiad Trust.

## Benefits

The Programming Olympiad challenges learners to use what they have learned in ways they may never have been taught.

## Target

Learners who can write computer programs / code in any computer language.

## How it works

Schools select to take part online or offline (or both). Schools select English or Afrikaans (or both). In the case of online participation, the Computer Olympiad office will send the required number of logins for the number of learners entered. The Olympiad computers do the marking (no marking for the teacher) and the results are sent to schools. Pen-and-paper answer sheets are marked by the teacher (easy - just one word or one number answers) and the results are sent to the Computer Olympiad office to add to the national results.

## Cost

Entry is free. To encourage all schools to enter, there is no entry fee. The Trust works closely with partners and volunteers to provide the support, backing and energy to deliver this service.

## Awards

Gold, silver and bronze certificates for half of the learners nationally in the First Round. Provincial certificates for the top three places above a certain level in the Second Round. Certificates and monetary awards for Final Round winners and their schools. Gold, silver and bronze medals are awarded at a national ceremony to the top six finalists.

## Competition Timelines

One week in **August**, a day for Round 2 in **September** and the Finals over a weekend early in **October**. The top four are sponsored to attend the International Olympiad in Informatics (IOI) the next year.

## Geographical Footprint

All nine provinces of South Africa.

# COMPUTER APPLICATIONS OLYMPIAD



## Overview

APPLICATIONS: To cater for the increasing number of learners who take Computer Applications Technology (CAT) or Computer Literacy at schools, the Computer Applications Olympiad was introduced in 2010.

## Entry requirements

Learners must know how to use a common “Office” package (spreadsheets, word processors, databases) to solve given problems. While selected learners can be entered by their schools, it is more beneficial if entire classes are entered. Only by entering an entire CAT class will teachers be able to make full use of the Teachers Guide issued after the event.

## Host

South African Computer Olympiad Trust.

## Benefits

The Applications Olympiad challenges learners to use what they have learned in ways they may never have been taught.

## Target

Learners who know a common “Office” package (spreadsheets, word processors, databases).

## How it works

Schools select to take part online or offline (or both).

Schools select English or Afrikaans (or both).

In the case of online participation, the Computer Olympiad office will send the required number of logins for the number of learners entered. The Olympiad computers do the marking (no marking for the teacher) and the results are sent to schools. Pen-and-paper answer sheets are marked by the teacher (easy - just tick, tick, tick) and the results are sent to the Computer Olympiad office to add to the national results.

## Cost

Entry is free. To encourage all schools to enter, there is no entry fee. The Trust works closely with partners and volunteers to provide the support, backing and energy to deliver this service.

## Awards

Gold, silver and bronze certificates for half of the learners nationally in the First Round.

Provincial certificates for the top three places above a certain level in the Second Round.

Certificates and monetary awards for Final Round winners and their schools.

Gold, silver and bronze medals are awarded at a national ceremony to the top six finalists.

## Competition Timelines

One week in **May**, a day for Round 2 in **June** and a full day for the Final Round in the winter school holiday.

## Geographical Footprint

All nine provinces of South Africa.

# SOUTH AFRICAN MATHEMATICS OLYMPIAD (SAMO)



## Overview

The South African Mathematics Olympiad (SAMO) is South Africa's biggest Olympiad. Approximately 100 000 high school learners across the country participate annually. There are two divisions: a junior division for grades 8 and 9 and a senior division for grades 10 to 12. Learners who score at least 50% in the first round which is written in March, qualify for the second round in May. The top approximately 100 junior and 100 senior learners from the second round qualify for the final round in July.

## Entry requirements

Grade 8 to 12 mathematics educators enter for the Olympiad on behalf of the learners by submitting a completed entry form that can be downloaded from [www.samf.ac.za](http://www.samf.ac.za) to [info@samf.ac.za](mailto:info@samf.ac.za) along with the proof of payment.

## Host

The SA Mathematics Olympiad (SAMO) is organised and coordinated by the South African Mathematics Foundation (SAMF).

## Benefits

Learner's critical thinking ability is improved and the discovery and validation of problem solving methods are developed through the SAMO questions.

## Target

Grade 8 to 12 learners.

## How it works

The first round is written in March. The junior division consists of separate papers for grades 8 and 9 and the senior division of one paper for grades 10 to 12. Each paper consists of 20 questions with multiple-choice answers and learners have one hour to complete the paper. Each school is provided with the solutions. For this round, the teachers mark the papers. Learners who attain 50% or higher in the first round qualify for the second round which is written in May. There are separate papers for the juniors and seniors. This time the grade 8 and 9 learners write the same paper. Learners have two hours to complete twenty five questions. The best 100 senior and junior learners from the previous round qualify for the third round which is written at centralised venues in July.

## Cost

Between R20 and R32 per learner for South African entrants. Quintile 1, 2 schools can enter up to 100 learners free of charge.

## Awards

There are prizes up for grabs for learners and schools such as a Gold medal, R 15 000 and an iPad for the senior overall winner. The junior overall winner walks away with a Gold medal, R 7 500 and an iPad. The runners-up for the senior division receive a Silver medal and R 5 000 each and the runners-up for the junior division receive a silver medal and R 3 000 each. The best performing female learner, best performing African learner and the best performing learner from outside SA for each division receive a trophy and R 1 500. The best performing learner per quintile receives a trophy and R 1 000. The top 3 learners per division per province receive provincial prizes.

## Competition timelines

The entries for the Olympiad close the first week of February and the First Round is written in March. The Second Round is written in May and the Final Round is in July.

For more information, go to:

Project Manager: **Herman Bosman** (012) 392 9316 | [herman@samf.ac.za](mailto:herman@samf.ac.za) | [www.samf.ac.za](http://www.samf.ac.za)

Project Coordinator: **David Ramboka** (012) 392 9324 | [ramabokad@samf.ac.za](mailto:ramabokad@samf.ac.za) | [www.samf.ac.za](http://www.samf.ac.za)

# SOUTH AFRICAN MATHEMATICS CHALLENGE (SAMC)



## Overview

The South African Mathematics Challenge (SAMC) consists of a first round and a final round, with separate papers for Grade 4, 5, 6 and 7. Each paper is an hour long and consists of 20 multiple choice questions. The first round of the SAMC is written during May. Learners who score at least 50% in the first round qualify for the final round in July.

## Entry requirements

The entry fee is between R10 – R12 per learner payable on entering for the First Round. Schools outside South Africa pay approximately R25 per learner.

Quintile 1 and 2 schools can enter up to 100 learners free of charge.

## Host

The SA Mathematics Challenge (SAMC) is organised and coordinated by the South African Mathematics Foundation (SAMF).

## Benefits

Learners attain conceptual knowledge, the application of knowledge in new situations, problem solving skills, reasoning, communication and general mathematical thinking.

## Target

Grade 4-7 learners.

## How it works

The Challenge consists of a First Round and a Final Round, with separate papers for Grade 4, 5, 6 and 7. Each paper is an hour long and consists of 20 multiple choice questions.

The First Round is written in schools on a specific date determined by the organisers at a time as arranged by the school. The papers are distributed only by e-mail to schools through Regional Organisers. Schools make copies of the papers for their learners. Learners who score at least 50% in the First Round qualify for the Final Round.

## Cost

The entry fee is between R10 –R12 per learner. Schools outside South Africa pay R25 per learner. Quintile 1 and 2 schools can enter up to 100 learners free of charge.

## Awards

Learners who enter the Challenge receive a certificate of participation and Final Round participants receive either a Gold, Silver or Bronze certificate of achievement. The Best Performing School is presented with an award at the SAMF annual award function. Other awards include Best New Performing, Best Participating and Best Performing per Quintile School.

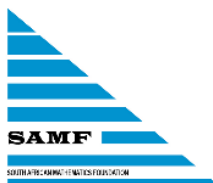
## Competition timelines

The First Round is written at participating schools in May. Learners scoring at least 50% in the First Round qualify to participate in the Final Round which is written in July.

For more information, go to:

Project Manager: **Patrick Rasehwete**: (012) 392 9348 | [rasehwep@samf.ac.za](mailto:rasehwep@samf.ac.za) | [www.samf.ac.za](http://www.samf.ac.za)  
Project Coordinator: **David Ramaboka**: (012) 392 9324 | [ramabokad@samf.ac.za](mailto:ramabokad@samf.ac.za) | [www.samf.ac.za](http://www.samf.ac.za)

# SIYANQOBA REGIONAL OLYMPIAD TRAINING PROGRAMME



## Overview

The Siyanqoba Regional Olympiad Training Programme provides bi-weekly Olympiad training at different centers throughout the country. The programme is offered free of charge to talented high school learners who show a ability and interest in mathematics. The programme concentrates on developing problem solving skills, unlike the regular school curricular where the focus is more on solving routine type questions.

## Entry requirements

The programme is offered free of charge to talented high school students throughout the country who show ability and interest in mathematics.

## Host

The Siyanqoba Regional Olympiad Training Programme is organised by the South African Mathematics Foundation (SAMF) in partnership with various universities across the country.

## Benefits

Learners will develop problem-solving skills, which will enable them to solve those non-routine type questions that are required from top achievers.

## Target

Grade 7 – 12 learners.

## How does it work?

Talented learners are identified through the SAMO and other SAMF programmes and are invited to attend classes at different centres across the country.

## Cost

The programme is sponsored by the Department of Science and Technology and is free of charge.

## Awards

Learners improve their chances to qualify for the second round or final round of the SA Maths Olympiad, are eligible for selection for the ASSA Mathematics Team Competition and Olympiad camps during the school holidays. The top learners per centre receive prizes at the SAMF provincial ceremonies.

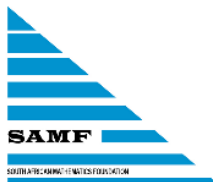
## Timelines

The programme is open throughout the whole year.

For more information, go to:

Project Manager: **Patrick Rasehwete**: (012) 392 9348 | [rasehwep@samf.ac.za](mailto:rasehwep@samf.ac.za) | [www.samf.ac.za](http://www.samf.ac.za)  
Project Coordinator: **David Ramaboka**: (012) 392 9324 | [ramabokad@samf.ac.za](mailto:ramabokad@samf.ac.za) | [www.samf.ac.za](http://www.samf.ac.za)

# OLYMPIAD TRAINING PROGRAMME



## Overview

The Mathematics Olympiad Training programme aims to identify talented mathematical minds and develop their talent through a series of assignments. The participants learn mathematical problem-solving techniques and interesting mathematical concepts, which will also help them to prepare for the different rounds of the South African Mathematics Olympiad (SAMO).

## Entry requirements

The Training Programme consists of a free distance learning programme. The Intermediate levels are open to anyone, while the Advanced level is only open to learners who have attended the annual SAMF Olympiad camp in December.

## Host

The Olympiad Training Programme is organised and coordinated by the South African Mathematics Foundation (SAMF).

## Benefits

The results of the Olympiad Training Programme and other SAMF programmes are used to select the South African teams for the International Mathematical Olympiad and Pan African Mathematics Olympiad. The participants learn mathematical problem-solving techniques and interesting mathematical concepts, which will also help them to prepare for the different rounds of the South African Mathematics Olympiad (SAMO).

## Target

Grade 7 to 12 learners.

## How it works

The programme is a distance learning programme that also involves mathematical camps during the school holidays. Learners are given assignments and tests during the programme.

## Cost

There is no cost involved.

## Awards

The opportunity to be considered for the South African teams for International Mathematical Olympiad and Pan African Mathematics Olympiad.

## Timelines

The programme is open throughout the whole year.

For more information, go to:

Project Manager: **Herman Bosman** (012) 392 9316 | [herman@samf.ac.za](mailto:herman@samf.ac.za) | [www.samf.ac.za](http://www.samf.ac.za)  
Project Coordinator: **Pebetse Mbonani** (012) 392 9362 | [pebetse@samf.ac.za](mailto:pebetse@samf.ac.za) | [www.samf.ac.za](http://www.samf.ac.za)



# TEACHER PROBLEM-SOLVING COURSE



## Overview

The South African Mathematics Foundation presents a short course in problem solving in different areas across the country. The successful completion of the course enhances appreciation for problem solving which in turn, may result in the improvement of the performance of learners in the South African Maths Challenge (grades 4-7) and South African Maths Olympiad (grades 8-12).

## Entry requirements

Grades 4 to 12 teachers can register for the course.

## Host

The Teacher Problem Solving Course is organised and coordinated by the South African Mathematics Foundation (SAMF).

## Benefits

Teachers are exposed to a variety of problem solving strategies and techniques. The course also enhances problem solving skills of teachers and improves their skill of solving Olympiad type problems.

## Target

Primary and Secondary School teachers.

## How it works

Teachers are offered a short course live in any area of South Africa where a group of at least 20 teachers are showing interest in the programme. The course is spread over two Saturdays at a venue close to the teachers. A training manual is provided to teachers to support reflection and self-study. Teachers not close to a main venue or those who prefer to do the course at their own time can register for the DVD version of the programme available in 4 levels: GET1, GET2, GET3 and FET1. It is mandatory for all teachers to do GET level 1 first as many of the strategies are expanded in the subsequent levels.

## Cost

The live taught course is free of charge. The self-paced course (DVD version of the course) costs R400 per teacher.

## Awards

Teachers who achieve 75% and above will receive a merit certificate while those achieving 50% and above but less than 75% will receive a pass certificate. All the GET and FET Level courses are endorsed by the South African Council of Educators and allocate 10 CPD points (continuous professional development).

## Timelines

The programme is open throughout the whole year.

For more information, go to:

### Primary Teacher Problem Solving Course

Project Manager: **Patrick Rasehwete**: (012) 392 9348 | rasehwep@samf.ac.za | www.samf.ac.za  
Project Coordinator: **David Ramaboka**: (012) 392 9324 | ramabokad@samf.ac.za | www.samf.ac.za

### Secondary Teacher Problem Solving Course

Project Manager: **Herman Bosman** (012) 392 9316 | herman@samf.ac.za | www.samf.ac.za  
Project Coordinator: **Pebetse Mbonani** (012) 392 9362 | pebetse@samf.ac.za | www.samf.ac.za

# SASOL TECHNO X



## Overview

Sasol's objective with Techno X is to host exhibits that excite visitors through user-friendly, hands-on, interactive and stimulating experiences. The target audience includes Grade 7 to 12 learners (from urban, rural, private and public schools across the country), university students and out of school youth. Innovation forms an integral part of Sasol Techno X and in order to stimulate learners with the ability to be acknowledged for their own work and inventions, various competitions (such as School Science projects, Art projects and Fashion shows) are hosted at the event. The combination of a career guidance exhibition filled with innovation and interactive hands-on experiences create awareness on career paths offered in the various scarce fields of Mathematics, Science and Technology.

## Entry requirements

Educators enter the competitions on behalf of learners by submitting a completed entry form which can be downloaded from [www.sasoltechnox.co.za](http://www.sasoltechnox.co.za). Entry forms will also be sent to schools or alternatively the competition coordinator can be contacted.

## Host

Techno X competitions fall under the annual career exhibition hosted by Sasol. Since the exhibition is held in Mpumalanga Sasol's education initiative, Osizweni Science Centre, will be the coordinating partner.

## Benefits

School Science Projects provide an opportunity for Gr 7 to Gr 12 learners to contribute to innovation and idea generation. It provides a platform for enthusiasts who are interested in scientific topics beyond those covered by the school syllabus. It also gives learners the opportunity to do research and extend their school projects outside the curriculum specifications.

## Target

Grade 7 to 12 learners from schools based in the four clusters (Nkangala, Gert Sibande, Bohlabela and Enhlanzeni) in Mpumalanga South Africa can enter.

## How it works

The competition entails that learners follow a scientific project process to investigate a problem in any of the specified 14 categories. Apart from the more traditional mathematics and engineering disciplines, fields beyond the school curriculum such as animal/veterinary science, health care, energy, astronomy and space science may be investigated.

Projects are subject to elimination rounds resulting in only selected projects to be displayed at the Sasol Techno X where judges will interview participants on their findings as part of the evaluation process

## Cost

There is no cost involved.

## Awards

Winning learners and their schools receive cash prizes, the highest prize being R2 000 for the winning school. Timelines  
The programme is open throughout the whole year.

## Competition timelines

Entries close end of May; further communication on elimination rounds will be communicated directly to schools.

For more information, go to:

PSchool Science Project Coordinator: **Bongani Thabethe**  
Tel 017 689 2008 | Fax entries to 017 689 2029 | Email [bthabethe@osizweni.org.za](mailto:bthabethe@osizweni.org.za)

Arts and Fashion Project Coordinator: **Emily Masango** or **Boitumelo Mokone**  
Email [emasango@osizweni.org.za](mailto:emasango@osizweni.org.za) | [bmokone@osizweni.org.za](mailto:bmokone@osizweni.org.za)

# FIRST ROBOTICS COMPETITION



## Overview

The mission of *FIRST* is to inspire young people to be science and technology leaders, by engaging them in exciting Mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

## Entry requirements

Teachers/coaches will enter teams of learners into the annual competition via the websites:

- FIRST Lego League Junior (FLL Jr.) age group 6-9 Years, 2-6 members per team <http://jflsa.org/>
- FIRST Lego League (FLL) age 9-16 Years, 2-10 members per team [www.flisa.org](http://www.flisa.org)
- FIRST Tech Challenge (FTC) age 12-18 Years, 2 or more members per team <http://ftcsa.co.za/>

## Host

FIRST Robotics programs are managed by TUT but hosted by regional partners like Universities and Science Centers.

## Benefits

- Discovery of the fun in science and technology
- Engagement of kids in meaningful, hands-on experimentation
- Presentation skills development
- Inspires young people to pursue careers in science, technology, engineering, and math (STEM)
- Provides students with relevant, project-based learning within an intense, fun sports competition model
- Teams develop problem-solving, organizational, and team-building skills

## Target

6 – 18 years of age with three different levels of programs for schools or home scholars and private robotics clubs.

## How it works

The annual robot challenge is based around a theme representing a real world problem. Teams need to do research around this problem and propose an innovative solution to a panel of judges. Teams have 8 weeks or more to design and build their robot that will compete against other teams. Teams participate in a regional tournament and can advance to the nationals and the international championships.

## Cost

FLL Jr. Team registration fees are R500 annually, WeDo Kit R2990 (Once Off)

FLL Team registration fee R500 and the challenge set (Robot field with mission model pieces) are R2000 annually. Robot Base set starts at R7200 Once off.

FTC registration fee is R2000 and the competition set (Not compulsory but helpful) up to R20 000. The Robot kit R20 000 but we help to find industry sponsors for the teams.

## Awards

All teams receive a participation medal and teams that are very good for a specific category will receive an award.

## Competition timelines

The challenges and robot game rules are released in August, the regional tournaments start in October and the National is hosted in the first Saturday in December. The internationals are normally hosted from March till June the following year.

# NZG LIFE SCIENCES COMPETITION



## NATIONAL ZOOLOGICAL GARDEN

### Overview

The National Zoological Garden hosts the Life Sciences competition, which commenced since 2011. This unforgettable event takes place in June every year. The topics such as microscope, evolution, biodiversity, cell etc. are part of engaging activities.

### Entry requirements

Grade 10 Life Science Teachers should attend the teachers workshop where a selection test will be written by the teachers. Workshops will be advertised by the education district officials. 10 schools per province from the four provinces ( Limpopo, Gauteng, Mpumalanga and North West) will be selected to participate in the final competition at the Zoo.

### Host

The National Zoological Gardens (Pretoria)

### Benefits

This competitiveness creates a positive attitude amongst learners that might help them to excel and apply the knowledge at school.

### Target

Selected schools, teachers and learners

### How it works

The selection process of schools starts by engaging various life science officials from provincial department districts to invite their respective schools to a workshop. Selection is based mainly on the teachers attending the workshops and competing on behalf of their schools for the inclusion in the competition. 40 schools from various provinces are selected to participate on the final competition. Each school selects three learners to participate on the final at the NZG gardens.

### Cost

Free of charge.

### Awards

Prizes include laptops, tablets, digital cameras and a trip to Durban for the top three schools.

### Competition timelines

The month of June.

# NANOQUIZ



## Overview

The Nanotechnology Quiz was started in 2010 for Grade 11 science learners by Moipone Academy. It aims to promote credible, fact-based understanding of nanotechnology through awareness, dialogue and education in order to enable informed decision making on nanotechnology innovations that could improve the quality of life. The objectives are to create awareness around nanotechnology; educate the public on, and enhance their understanding of, nanotechnology; enable and stimulate meaningful public debate around nanotechnology; stimulate interest in nanotechnology and nanoscience as a career in order to ensure long term capacity building in the field; and get industry involved in the development of nanotechnology and taking the lead in nanotechnology innovation.

## Entry requirements

Grade 11 science learners who do well in Mathematics and Physical Science are selected and invited

## Host

Moipone Academy

## Benefits

Learners are afforded the opportunity to enhance their knowledge in Nanotechnology against peers, as well as hone their fast-thinking and fast-acting skills during rapid question and answer sessions, like that of a game show. In addition, schools are provided with the necessary resource booklet, that prepares their teams for the competition, but that can also add value in the classroom.

## Target

Grade 11 science learners from schools based in South Africa.

## How it works

Schools select their top four Mathematics and Physical science grade 11 learners to participate in the district competition. During round one, the learner teams conduct a written test that is moderated by the Department of Education officials, teachers, and/or science center facilitators. During the next two rounds, schools compete against each other in an interactive quiz session to gain a top spot. These sessions are facilitated and moderated by a panel of judges.

## Cost

Free entry to all participants.

## Awards

Each learner receives a participation certificate at the end of round one. During the provincial rounds, learners are awarded an assortment medals and trophies, amongst others. The teams that progress to the national finals stands a chance to secure the latest technological gadgets, such as laptops and tablets.

## Competition timelines

Districts rounds; Round one is conducted in June, followed by Provincial; Round two in July, and followed by the National Finals in September of every year.

# VIRTUAL GET EXCITED ABOUT ROBOTICS (GEAR) COMPETITION



## Overview

Get Excited About Robotics (GEAR) was founded in Texas, USA, in 2002 by Robert Acosta. The Virtual GEAR competition was piloted in 2015 and held annually thereafter with teams from South Africa, Germany and the United States of America participating in the competition. The competition runs for three months during which participants construct their game field, create a team video, design their robot, participate in the trial run and game day and create a video explaining their robot design.

## Entry requirements

Robotics coaches sign up their teams of learners electronically and serve as point of communication. Each team needs to have access to 1 LEGO MINDSTORMS EV3/NXT robotics kit, 1 computer/laptop with EV3/NXT software installed, Internet access (at certain days), video recording capabilities (anything from cell phone to professional video camera) and ability to upload videos to the Internet, e.g. to Google Drive, live video conferencing capability during Game Day, e.g. through Skype, Lync, Facetime. Participation is open to all teams with a coach (school teams, after school clubs, science centres, private groups of friends, etc.).

## Host

Inspired towards Science, Engineering, and Technology (I-SET) at the University of South Africa (UNISA) and the Whitacre College of Engineering (WCOE) at Texas Tech University (TTU) jointly host the competition.

## Benefits

GEAR was created to foster interest among today's youth in a career in engineering, science or technology. It is vital that they learn how engineers and scientists add value to our society and without them the world today would not be possible. Engineers and scientists are the true heroes of our modern world, but all of us have the potential to create something that can make the world a better place. In addition to learning computer programming and engineering design skills, learners gain teamwork, problem-solving, time-management, and critical thinking skills.

## Target

Grade 3 to 8 learners from schools, science centres, after school clubs, and private groups with a coach. Participation is open to teams worldwide. There is no limitation on the number of learners per team but three to eight learners are recommended.

## How it works

Teams design their robot using the LEGO MINDSTORMS EV3/NXT kits and compete in two-minute matches on a 4' x 4' game field during which the robot must complete tasks of the annually-changing challenge autonomously. In January, coaches sign up their teams electronically. They then receive information regarding the general rules and the game field layout. Coaches and teams are responsible to construct their own game field using inexpensive game field elements from supermarket or hardware store. Teams then receive the game specific rules by email and have about a month to design their robot, after which they compete in May. All teams are scored and a ranking is determined using the robot performance at trial run and game day and the quality of the engineering design video. Winners are announced during the second half of May.

## Cost

Registration and participation is for free. However, each team must have the resources to compete.

## Awards

Each learner receives a participation certificate. The top four teams receive an award certificate.

## Competition timelines

Registration is in January and the competition runs from February through mid-May.



# ROCKETS & ROBOTS

Rockets & Robots

*"Impossible is Nothing"*



## Overview

The shortage of scientists, engineers and mathematicians urgently requires that our youth must be motivated to enjoy and study science, technology, engineering and math subjects at school and then at tertiary institutions. In this context, The SPEAR conceptualized the **Rockets and Robots Project**. Robots & Rockets must create major opportunities for engineering, science, technology and mathematical advancement.

The Rockets and Robots Project is the precursor to the **Rockets and Robots Olympiad**.

## Entry requirements

Science Clubs from registered and participating schools.

## Host

The SPEAR Development Foundation (Sustainable Performance through Enrichment Activities and Reward)

## Benefits

The Rockets and Robots Olympiad provides a platform for intra-team cooperation in an inter-team Olympiad; assess individual and team strengths against peers; educators and Learners are exposed to and learn from industry gurus, and participating schools are provided with Lego, Rocketry and Raspberry Pi kits.

## Target

Grade 7 to Grade 11 learners from participating schools.

## How it works

Educators and Learners must be capacitated with basic skills in robotics, rockets and Raspberry Pi technologies. These skills must be consolidated through practice (e.g. inter-team, interschool competitions). It starts with training educators during the first term. Educators then start *Science Clubs* at school to host STEMI activities after which they can participate in the interschool Rockets & Robots Olympiad. A **Robots and Rockets Olympiad** is a five-day, space-themed "boot camp" for Grades 8 to Grades 11, where Learners in teams will have opportunities to interact with industry gurus, acquire some theoretical and technical knowledge about rockets and robots and practically build rockets that are launched vertically or traverse in a horizontal plane and robots that complete missions.

## Cost

Administration fee that will not exceed R 50 per Learner.

## Awards

Every learner will receive a Certificate of Attendance reflecting the grading achieved.

## Geographical footprint

Northern Cape Province

## Competition timelines

School vacations; first term: educator training | June or September: Olympiad

For more information, contact:

Cordon Africa | Tel: 072 460 6410 or (053) 833 1654 | Email: gbafrica0110@gmail.com

# SOUTH AFRICAN NATIONAL GEOGRAPHY OLYMPIAD (SANGO)



## Overview

The South African National Geography Olympiad (SANGO) aims to: (1) foster a love of Geography at secondary school level, and (2) send a South African team to the International Geography Olympiad (iGeo). The SANGO is an annual online competition with 40 multiple choice questions, each with graphics.

## Entry requirements

Learners must have their own individual email addresses to participate. All schools must provide learners adequate internet facilities to access the Olympiad on the day.

## Host

The academic Society of South African Geographers (SSAG), in partnership with the South African Geography Teacher Association (SAGTA), host the annual online SANGO.

## Benefits

Participating in the SANGO supports learners to inspire their interest in the subject, test their geographic knowledge, and receive recognition for doing so.

## Target

All learners enrolled in either Grade 10, 11, or 12 at a High School in South Africa are eligible.

## How it works

Schools register learners to participate in the SANGO, which is conducted online at the schools' premises, between 7am and 5pm on the designated date.

## Cost

There is a small entry fee per school and per learner. Email us, or check the website, for yearly details.

## Awards

All learners are awarded an official electronic certificate in the following categories: Participation, Bronze, Silver, Gold, and Platinum. Prizes may be awarded to top students.

## Geographical footprint

The SANGO is available online for participation nationwide.

## Competition timelines

Usually May each year. Email us, or check the website for details.

For more information, contact:

Email: [sa.geog.olympiad@gmail.com](mailto:sa.geog.olympiad@gmail.com) | Website: [www.ssag.co.za/category/education/](http://www.ssag.co.za/category/education/) or <https://sagta.org.za/Olympiad.php>

# MINQUIZ™



## Overview

Minquiz regarded as South Africa's premier annual national Science competition for Grade 12 learners is organised by Mintek. The aims of Minquiz are to encourage interest in careers in Science, Engineering and Technology, especially (but not exclusively) in minerals and metallurgy, and to promote an awareness of the importance of minerals and metallurgy to South Africa. Minquiz is intended to entertain participants, while at the same time conveying the importance of Mathematics and Science as foundational subjects to a career in STEMI disciplines.

## Entry requirements

Only learners in Grade 12.

## Host

The competition is organised by Mintek.

## Benefits

Teachers are exposed to a variety of problem solving strategies and techniques. The course also enhances problem-solving skills of teachers and improves their skill of solving Olympiad type problems.

## Target

Only learners in Grade 12 as defined in the National Curriculum Statement can enter Minquiz. Individuals are also able to enter Minquiz, as long as they are eligible to enter. This will allow home-schooled learners or learners at schools where the educators or school management are not able to enter a full team.

## How it works

Participating learners write a preliminary multiple-choice question test individually, followed by competing as a team during a live, on-stage oral quiz, also with multiple-choice questions. Provincially the competition is held nationwide and the National Competition is held in Johannesburg. Questions are in the areas of Physical Science, Mathematics and general knowledge in Science, Engineering and Technology.

## Cost

No, registration fee required, participation is free.

## Competition timelines

The Minquiz Provincial Competition is held in all provinces on the same date every year. Schools enter a team consisting of 3 learners and are assigned to either the Gold or Platinum category by based on the schools' previous 3-year performances in Mathematics, Physicals Science and English.

For more information, go to:

Minquiz National Coordinator | [minquiz@mintek.co.za](mailto:minquiz@mintek.co.za) | 011 709 4139 / 4111.

# FAMELAB® SOUTH AFRICA



## Overview

FameLab® is an international science communication and public speaking competition that promotes science and technology by creating a platform for young scientists to find their voices and reach public audiences. Within the context of government's commitment to science engagement through the Department of Science and Technology's Science Engagement Framework, FameLab speaks to key strategic aims in developing science communication and promoting and popularising science for public audiences.

## Host

FameLab® is an initiative of Cheltenham Science Festival, United Kingdom. The British Council, in collaboration with the South African Agency for Science and Technology Advancement (SAASTA) and Jive Media Africa, coordinates the FameLab competition in South Africa.

## Benefits

The purpose of FameLab is to provide a platform for scientists and researchers to nurture their public speaking skills, especially researchers from historically disadvantaged communities who lack opportunities for public engagement to develop these skills. Participants benefit by enhancing their communication and presentation skills through competition and training; being part of multi-disciplinary science discussions by networking with other scientists from diverse disciplines in South Africa and internationally; and being part of the growing community of passionate scientists on an international scale. In addition, partner organisations benefit by identifying and nurturing science communication talent; building capacity for science engagement and professional communication within their organisations; and profiling their work in scientific development and innovation.

## Target

Young scientists aged 21 to 35, studying or working at a South African institution in the areas of science, technology, engineering, mathematics, or innovation. In addition, other institutions, science councils, science/engineering associations or organisations are invited to host their own heat.

## Entry requirements

Direct entries or video entries by young scientists aged between 21 and 35, working or studying in the fields of science, engineering, and technology. Entry registration forms and competition rules can be downloaded from [www.britishcouncil.org.za](http://www.britishcouncil.org.za).

## How it works

FameLab contestants are required to give a 3-minute talk, with the aid of props, which is engaging and entertaining for a public audience. Contestants are judged on content, clarity, and charisma. Pre-qualification rounds or heats are coordinated internally by host organisations, or open heats, which are open to all that meet the eligibility criteria. Prior to the heats, a science communication workshop is held to assist participants in developing skills in preparation for these heats. During a heat, a judging panel determines who will move on to the next round. Qualifying contestants from both the institutional and public heats progress through to Masterclass training that is facilitated by a FameLab-accredited international trainer. Once completed, these participants compete in the national semi-finals and then the finals. Finally, the overall winner of FameLab South Africa then progresses to the international finals hosted in the United Kingdom.

## Cost

Free entry to all participants.

## Award

In addition to a cash prize of R5,000, the winner of FameLab SA wins an all-expenses paid trip to the UK to participate in the international finals. Two runners-up are awarded a cash prize of R2500 and 20 semi-finalists received book vouchers to the value of R500 each. As an added benefit, all participants can develop their science communication skills through workshops that are hosted at various stages of the FameLab competition implementation.

## Competition timelines

Heats run from **July to March** the following year. The Masterclass and semi-finals are hosted in **March**; the national finals between **April and May**; and the international finals are hosted at the beginning of **June** each year.

For more information, go to:

British Council: **Anisa Khan** | [anisa.khan@britishcouncil.org](mailto:anisa.khan@britishcouncil.org) | (011) 560 9312 - Jive Media Africa: **Robert Inglis** | [robert@jivemediaco.co.za](mailto:robert@jivemediaco.co.za) | (033) 342 9382  
NRF|SAASTA: **Joanne Riley** | [joanne@saasta.ac.za](mailto:joanne@saasta.ac.za) | (012) 392 9349

# NATIONAL SCIENCE OLYMPIAD™



## Overview

The National Science Olympiad™ was started in 1964 by FEST (Foundation for Education, Science, and Technology), an organisation that became the business unit of the National Research Foundation (NRF) in 2002 and subsequently renamed as the South African Agency for Science and Technology Advancement (SAASTA). The aim of the National Science Olympiad is to identify and nurture evident and latent talent in Sciences, encourage excellence in Science education, while also stimulating interest. It seeks to inspire the youth to consider careers in Science and Technology to address the inadequate renewal of SET human capital in South Africa.

## Host

The National Science Olympiad is coordinated by the Science Education Division of the South African Agency for Science and Technology Advancement; a business unit of the National Research Foundation.

## Benefits

Learners are provided with the opportunity to compete and test their knowledge in Physical (Physics and Chemistry) or Life Sciences on a national scale. The top participants are then provided with the opportunity for further development during a Science Focus Week, where they are exposed to different applications of Science through lectures, exhibitions, and industry excursions, amongst others.

## Target

Grade 10 to 12 learners from schools based in South Africa and the South African Developing Countries (SADC).

## Entry requirements

Physical and Life Sciences Educators enter for the Olympiad on behalf of the learners by submitting a completed entry form that can be downloaded from [www.saasta.ac.za](http://www.saasta.ac.za)

## How it works

Exam papers are couriered to participating schools on the scheduled date. The participants then engage in a paper-based, curriculum-aligned and beyond examination that consists of 100 multiple choice questions in either the Life Sciences or Physical Sciences stream. The answer sheets are then collected from the schools and marked by an independent body. Subsequently, the results are then communicated to each school.

## Cost

R35 per learner.

## Award

Each learner, who scored 50% and above, receives a participation certificate with his or her result range. In addition, the top learners are invited to a focus week that concludes with an award ceremony. At this ceremony, top performing learners are segregated into categories and awarded with the latest technological gadgets based on their performance. Finally, the top four learners are announced that will be attending the London International Youth Science Forum.

## Competition timelines

The written examination is conducted during **May**, followed by the Focus Week during the **September/October** school holidays and ending off with a prestigious Gala event.

For more information, go to:

Project Officer: **Ramoloi Maxalaba** | (012) 392 9360 | [ramoloi@saasta.ac.za](mailto:ramoloi@saasta.ac.za) | [www.saasta.ac.za](http://www.saasta.ac.za)

Project Coordinator: **Erna Taljaard** | (012) 392 9300 | [etaljaard@saasta.ac.za](mailto:etaljaard@saasta.ac.za) | [www.saasta.ac.za](http://www.saasta.ac.za)



## Overview

Olympiads and competitions are used as a tool to identify and nurture talent in SET and it is vital to embark on these types of activities at primary school level to build analytic skills in mathematics and science from an earlier age. Mathematical and scientific knowledge is hierarchical in nature and, therefore, strong prior knowledge is critical for conceptual development. Considering this, NRF|SAASTA introduced the Natural Science Olympiad™ to grade 4 to 9 learners in 2011 with the aim of stimulating interest for participation in the NRF|SAASTA National Science Olympiad™, which includes several elements that further nurture talent that could ultimately feed into the STEMI industry.

## Host

The Natural Science Olympiad is coordinated by the Science Education Division of the South African Agency for Science and Technology Advancement; a business unit of the National Research Foundation.

## Benefits

Learners are encouraged to participate to improve academic performance; test their knowledge against peers; and to be empowered with the knowledge that is not necessarily taught in class. In addition, the top participants are invited for further development during a trip to Gauteng, where they are exposed role modeling campaigns and industry excursions, amongst others

## Target

Grade 4 to 9 learners from schools based in South Africa and the South African Developing Countries (SADC).

## Entry requirements

Educators enter the Olympiad on behalf of their learners by submitting a completed entry form directly to NRF|SAASTA. No individual entries from learners are accepted. The entry form can be downloaded from [www.saasta.ac.za](http://www.saasta.ac.za).

## How it works

Exam papers are couriered to participating schools on the scheduled date. The participants then engage in a paper-based, curriculum-aligned and beyond examination that consists of multiple choice questions in the Natural Sciences stream. The answer sheets are then collected from the schools and marked by an independent body. Subsequently, the results are then communicated to each school.

## Cost

The entry fee is R35 per learner.

## Award

Each learner who obtained a mark of 50% and above, receives a participation certificate. In addition, the top learners are invited to an award ceremony, where the top achievers are awarded prizes based on their performance.

## Competition timelines

The examination is written during **May** each year, followed by the award ceremony during the **September/October** school holiday.

For more information, go to:

Project Officer: **Ramoloi Maxalaba** | (012) 392 9360 | [ramoloi@saasta.ac.za](mailto:ramoloi@saasta.ac.za) | [www.saasta.ac.za](http://www.saasta.ac.za)

Project Coordinator: **Erna Taljaard** | (012) 392 9300 | [etaljaard@saasta.ac.za](mailto:etaljaard@saasta.ac.za) | [www.saasta.ac.za](http://www.saasta.ac.za)

# SOUTH AFRICAN SCIENCE LENS™ COMPETITION



## Overview

The South African Science Lens™ Competition, established in 2002, aims to encourage the use of photography as a tool for science communication and to encourage scientists to share and communicate their scientific research in a creative and innovative manner to, ultimately, develop science communication skills across the SET sector. The secondary aim of the competition is to encourage society to observe and appreciate science in their everyday lives.

## Host

The South African Science Lens™ Competition is coordinated by the Science Communication Division of the South African Agency for Science and Technology Advancement; a business unit of the National Research Foundation.

## Benefits

Apart from the opportunity to communicate scientific research in a creative and innovative manner, participants stand a chance to win cash prizes and have their photograph displayed in various forms of photo exhibitions.

## Target

The competition is open to the public in all age categories; however, NRF|SAASTA encourages participation by scientists and researchers.

## Entry requirements

The competition is open to the public and entries are accepted by e-mail or by online submissions. The competition categories, rules, and guidelines are available on [www.saasta.ac.za](http://www.saasta.ac.za).

## How it works

SA Science Lens™ has maintained three consistent categories each year, namely; Science as Art that illustrates the beauty of science or shows natural subjects in abstract ways; Science in Action that captures sciences as it happens; and Science Close-up that reveals aspects of science that cannot be seen with the naked eye. Each round has an additional category, or categories, which vary from year to year. Participants will select an object or action of their choice that communicates science in the categories. The entries include the photograph as well as a description of the photograph, which must communicate the science or work of a scientist. An appointed panel of scientists, photographers and science communicators judges the entries.

## Cost

Free entry to all participants

## Award

The winner and runner-up of each category of SA Science Lens™ are awarded a cash prize of R10 000 and R5000, respectively.

## Competition timelines

SA Science Lens runs biennially (and alternates with the Young Science Communicator's Competition™). Entries open in August and close in October.

For more information, go to:

Project Coordinator: **Joanne Riley** | [joanne@saasta.ac.za](mailto:joanne@saasta.ac.za) | (012) 392 9349 | [www.saasta.ac.za](http://www.saasta.ac.za)



# YOUNG SCIENCE COMMUNICATORS COMPETITION™



## Overview

Young Science Communicator's Competition (YSCC) aims to encourage young scientists and science students in higher education institutions and science councils to communicate their science and research to the broader public community, using a variety of communication modes, including writing, audio, video, and other creative modes.

## Host

The Young Science Communicators Competition is coordinated by the Science Communication Division of the South African Agency for Science and Technology Advancement; a business unit of the National Research Foundation.

## Benefits

Young scientists and researchers are provided with the opportunity to communicate their research to a larger audience beyond their scientific peer community. In addition, this competition entices young scientists, who may not have had the opportunity or incentive to communicate their work, to develop skills and expose them to opportunities in science communication.

## Target

Young scientists and researchers aged 18 to 35, studying or working at a South African Higher Education Institution or Science Council.

## Entry requirements

Participants must be young scientists, aged between 18 and 35 that are studying or working at a South African Higher Education Institution or Science Council. Entries are accepted by e-mail or by online submissions. The competition categories, rules, and guidelines are available on [www.saasta.ac.za](http://www.saasta.ac.za).

## How it works

The YSCC has four categories: a written popular article on science and science-related issues; an audio clip; a video clip that is entertaining and can be spread through social media; and an open category for other modes of communication such as poetry, comics, or other graphics. A panel of judges selects a winner and runner-up for each category.

## Cost

Free entry to all participants.

## Award

The winner and runner-up of each category of the Young Science Communicators Competition are awarded a cash prize of R10 000 and R5000, respectively. In addition, top entrants receive further science communication skills development.

## Competition timelines

The competition runs biennially (and alternates with the SA Science Lens Competition). Entries open in **August** and close in **October**.

For more information, go to:

Project Coordinator **Joanne Riley** | [joanne@saasta.ac.za](mailto:joanne@saasta.ac.za) | (012) 392 9349 | [www.saasta.ac.za](http://www.saasta.ac.za)

# ASTROQUIZ™



## Overview

The AstroQuiz™ Competition is a live, interactive Astronomy-focused questions and answers competition for teams of learners. Initially founded in 2005 at Sci-Bono Discovery Centre by means of an NRF|SAASTA grant for the National Astronomy Platform month, the competition enjoyed almost instant success and was subsequently established as a fixed annual competition that gained a national footprint. The objective of this competition is to contribute to the improvement of awareness, interest, understanding, and insight into basic astronomy, as well as, build an appreciation of and pride in South Africa's history of science activity and achievements, amongst others.

## Host

The AstroQuiz is coordinated by the Science Awareness Platform Division of the South African Agency for Science and Technology Advancement; a business unit of the National Research Foundation.

## Benefits

Participants are provided with the opportunity to enhance and test their knowledge in Astronomy against peers, as well as hone their fast-thinking and fast-acting skills during rapid question and answer sessions, like that of a game show. In addition, schools are provided with the necessary resource packs, that no only prepares their teams for the competition, but that can also add value in the classroom.

## Target

Grade 7 learners from schools based in South Africa and the South African Developing Countries (SADC).

## Entry requirements

Educators must enter their teams of four learners at the identified science centres or related institutions in their province. Entry guidelines can be viewed on [www.saasta.ac.za](http://www.saasta.ac.za).

## How it works

Since schools are only allowed to enter four learners as a team, some schools conduct a qualifying test of their own for all their learners. The learners that gain the highest scores are then selected to participate in the provincial competition. The provincial competition consists of four rounds. During round one, the learner teams conduct a written test that is moderated by the Department of Education officials, teachers, and/or science center facilitators. During the next three rounds, schools compete against each other in an interactive quiz session to gain a top spot for their province and science centre. Only the top five teams then progress to the national event to compete in a fast-paced quiz, where not only knowledge but fast-acting response with a buzzer, leads to victory. These sessions are facilitated and moderated by a panel of judges.

## Cost

Free entry to all participants.

## Award

Each learner receives a participation certificate at the end of Round one. During the provincial rounds, learners are awarded an assortment medals and trophies, amongst others. The teams that progress to the national finals stands a chance to secure the latest technological gadgets, such as laptops and tablets.

## Competition timelines

Provincial rounds; Round one is conducted in **May**, followed by Round two in **July**, and Round three and four, in **August**. These rounds are followed by the National Finals in **September/October** of every year.

For more information, go to:

Project Coordinator: **Erna Taljaard** (012) 392 9337 | [etaljaard@saasta.ac.za](mailto:etaljaard@saasta.ac.za) | [www.saasta.ac.za](http://www.saasta.ac.za)

# NATIONAL SCHOOL DEBATES



## Overview

The SAASTA National Schools Debates Competition is one of the flagship projects that provides learners with an opportunity to develop their research, critical thinking, and information literacy skills, as well as their ability to work as a team to present logical arguments. Amongst the objectives of the competition is to build science communication ambassadors out of learners through researching and debating of high-level scientific topics. The competition, established in 2008 in three provinces, has since expanded to include all nine provinces.

## Host

The SAASTA Schools Debates Competition is coordinated by the Science Communication Division of the South African Agency for Science and Technology Advancement; a business unit of the National Research Foundation.

## Benefits

The National Schools Debates Competition is an initiative that gives learners the opportunity to develop their research, critical thinking, and information literacy skills through training workshops and specialist resource packs. In addition, a platform is provided where learners can practice and refine their public speaking skillset.

## Target

Grade 9 to 11 learners from schools based in South Africa.

## Entry requirements

Schools enter one team that consists of five learners from grades 9 to 11. A call for interest is sent out in May, whereupon schools respond in kind. The competition rules and guidelines are available on [www.saasta.ac.za](http://www.saasta.ac.za).

## How it works

Schools enter teams by responding to a call for interest. Schools are then shortlisted based on their performance at provincial workshops. The provincial workshop has two main objectives. The first half of the workshop focuses on the training of the debating style, research methodology, and the use of social media to discuss ideas. The second half of the workshop involves a mini-debate, which is adjudicated by a panel of judges and from which a final selection of 10 teams to participate in the provincial competitions are made. Finally, the competition ends off with a national event, where a panel of judges selects the top three teams. The most interesting feature of the SAASTA Schools Debates is that each topic is argued using four different perspectives namely: economic, applications and benefits, political and socio-cultural aspects. In addition, learners are encouraged to share their viewpoint during the mini Imbizo's and with social media.

## Cost

Free entry to all participants.

## Awards

Prizes are awarded during each phase of the competition and include medals, trophies and advanced technological gadgets for learners. In addition, the top team is awarded an international educational trip to visit various science related sites in New York.

## Competition timelines

The provincial workshops are conducted in all nine provinces, followed by the provincial tournament, ending with the national tournament in **September/October** every year.





# ASTEMI

SCIENCE TECHNOLOGY ENGINEERING  
MATHEMATICS INNOVATION

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OLYMPIADS & COMPETITIONS

The Association of Science, Technology, Engineering, Mathematics & Innovation

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