

# NFR-SAASTA SCIENCE ENGAGEMENT HIGHLIGHTS REPORT 2018/2019

ADVANCING KNOWLEDGE • TRANSFORMING LIVES • INSPIRING A NATION





Department: Science and Innovation REPUBLIC OF SOUTH AFRICA



# Contents

The National Research Foundation and Science Engagement Managing Director's message	<b>3</b> 4
Science Education	5
<ul> <li>Igniting passion for STEM careers through career development services</li> <li>GLOBE Learning Expeditions 2018 (Killarney, Ireland)</li> <li>National Science Olympiad and competition</li> <li>AstroQuiz<sup>™</sup> competition (Grade 7)</li> </ul>	5 6 10 11

Science Awareness	13
<ul> <li>Capacity development in science centers highlights</li> </ul>	14
• Festival highlights	15
National Science Week	16
	15

Science Communication	18
<ul> <li>Young voices in science on the global stage at FameLab International</li> </ul>	19
• YSTJ highlights	21
• Bridget – liberty radio awards	22
<ul> <li>30<sup>Th</sup> iphe steering committee meetings and related events</li> </ul>	24
YSCC winners	30
<ul> <li>About the author - Michel Strauss</li> </ul>	32
<ul> <li>About the author - Molly Czachur</li> </ul>	34
Winner Young Science Communicators competition, Indigenous Language	35
<ul> <li>About the author - Chwayita Ncedana</li> </ul>	37
<ul> <li>An art and science collaboration: SA Science Lens</li> </ul>	38
National Science Olympiad and competition result booklet 2019	40

# The National Research Foundation and Science Engagement

The National Research Foundation (NRF) acknowledges the role of science engagement in the achievement of its strategic goals. To fully realise the social, economic and environmental benefits of the significant investment in science, research and innovation, the NRF endeavours to engage the wider community more fully in science and in an understanding of the knowledge economy. One of its business units, the South African Agency for Science and Technology Advancement (NRF-SAASTA) is tasked with facilitating the communication and advancement of science. NRF-SAASTA and the NRF's national research facilities interact closely with a network of science centres, higher education institutions, science councils, professional science associations and a host of other science-based entities at national and international levels to engage the public in science, engineering and technology. All science promotion or awareness programmes within the NRF reside under three key strategic areas that combine to form an integrated and seamless approach. The three areas are interdependent, each enhancing the effectiveness of the other – often an educational event will also enhance science awareness or a science communication intervention in the media will add to readers' education:

- Through education, we build up the supply of tomorrow's scientists and innovators.
- Through communication, we celebrate South African achievements in science and technology and build the public's appreciation of the benefits of science.
- By growing the awareness of science through exploration, exhibitions and actual experience, we instil in people an enthusiasm about the wonder and application of the subject, while encouraging greater public engagement.

## **Mission**

To advance public awareness, appreciation of and engagement with science, technology, engineering, mathematics and innovation in South Africa.

# Vision

NRF-SAASTA aims to be the leading science advancement agency communicating the value and impact of science and technology in a dynamic knowledge economy, and simultaneously building the science engineering technology human resource based in South Africa.

### Message from the Managing Director

Since NRF-SAASTA was established in 1999, based on our business mandate to "advance public awareness, appreciation of and engagement with science, technology, engineering, mathematics and innovation (STEMI) in South Africa," we have strived to continue to communicate the advances of science and technology to the public and steer young minds towards careers in STEMI. Looking forward, we are committed to achieving our vision of communicating the value and impact of science and technology in a dynamic knowledge economy and simultaneously build the science engineering technology human resource based in South Africa.

Our advances in science, science literacy and science engagement is becoming more valuable with increased participation numbers and impact in our activities such as National Science Olympiad, Natural Science Olympiad, National School Debate competition and Astro Quiz increasing yearly.

Incorporating science awareness platforms in our directive has enabled us to deliver widely on our strategic areas by growing the awareness of science through explorations, exhibitions and actual experiences and thus creating an interface between science and society.

For NRF-SAASTA to continuously improve public understanding of science and science engagement, it is necessary for us to provide credible and accurate information that is accessible to all South African communities.

We have enhanced excellent capabilities that we currently have to ensure that audiences are targeted and reached using efficient communication methods. This is achieved through our efforts in scientific information management and packaging of information; and by using the correct medium through which to communicate science, e.g. print, broadcast, online, social media and mobile telephony.

We believe that by faithfully continuing on endeavours such as involving the science sector in communicating science, e.g. working with science journalists to ensure optimal access to scientific content, scientists and research facilities; collaborating with media partners; and encouraging scientists to communicate their work, NRF-SAASTA can continually create innovative science engagement solutions for unmet science needs that exist in large numbers within our society.

This sound organisational culture provides the foundation for us to fulfil our responsibility to society. We are governed by a common set of values to be consistent in our thoughts and actions. Having our employees practice and demonstrate these values (World-class service; Passion for excellence; Integrity and ethics; People-centred; Respect and Accountability) to the fullest has created an organisation that continually produces new value.

In the future, too, NRF-SAASTA aims to stand on the forefront of science engagement, turning science and scientific literacy into value for the society and we will continually strive to fulfil our strategic objectives in line with our Science engagement Strategy by:

- Popularising science, engineering, technology and innovation as attractive, relevant and accessible in order to enhance scientific literacy and awaken interest in relevant careers.

- Developing a critical public that actively engages and participates in the national discourse of science and technology to benefit the society.

- Promoting science communication that will enhance science engagement in South Africa.

 Profiling South African science and science achievements domestically and internationally, demonstrating their contribution to the national development and global science, thereby enhancing their public standing.

# **Science Education**

#### Igniting passion for STEM careers through career development services

Based on the core values of NRF-SAASTA and the strategic aim of the Science Engagement Strategy, career development services is one programme that is committed to transforming lives and popularising science through the engagement and outreach of local, active participants in the science orientated fields. In simpler terms career development services is aimed at creating a platform(s) to guide the young minds towards STEMI related careers. 2018/2019 was momentous year for the career development services of the Science Education Division of NRF-SAASTA. In 2018, the division broke new grounds through establishing new connections, inspiring and giving guidance to learners that were in need of an intervention. The Division stretched its footprint to new frontiers through sustaining and building new partnerships. Together with critical strategic participants such as non-profit organisations, government departments, and other collaborators, NRF-SAASTA was able to extend its reach and open doors to new opportunities.

Community organisations played a vital role in expanding the programme, independently mobilising schools and inviting NRF-SAASTA to get involved in schools' career days/expos. Many communities came on board as they saw the impact of the programme, and many of these communities were eager to tap into NRF-SAASTA's passion for excellence. The programme left no surface untouched, spanning from urban to rural areas, and moving from central to the peripheral settlements reaching more than 12 000 learners across the country.

The programme has carved its way into many hearts, even attracting the unit/division responsible Social Cohesion and Equity in Education of the Department of Basic Education to collaborate with NRF-SAASTA. Through their integrated approach Jamboree for the future choices, the Science Education division was able to access new schools and to drive the STEM agenda at the various jamborees.

In the rightful hands, Mr James Tlhabane and the passionate efforts of Ms Makhanana Nkhwashu the programme diversified in 2018/2019 making room for niche and unpopular careers to be profiled. The duo together with key NGO collaborators such Rural 2 Rural, PP Maths, Maps and Mirrors, Outlook and MANYEO carefully and creatively structured their programmes in such a way that it was diverse in content. The team also invested the SMART use of educational resources and technological tools to appeal, educate, excite, entertain, enrich and fundamentally entrench the importance for learners to follow STEMI orientated career paths.



Image: NRF-SAASTA staff sharing knowledge on niche and unpopular careers

#### GLOBE Learning Expeditions 2018 (Killarney, Ireland)

GLOBE Learning Expeditions (GLE) conferences are organized every four years providing learners from around the world an opportunity to present their research projects to their peers, to GLOBE scientists, and the greater GLOBE community. These conferences also provide learners with the opportunity to establish friendships and to develop collaborative partnerships that will enhance their future GLOBE experiences.

The GLOBE community is formed by 121 countries, of which 27 of them are from Africa 32 452 Schools and 32123 teachers and over 155, 619, 013 measurements have been uploaded on the GLOBE programme.

GLE 2018 was held from the in Killarney, Ireland from 1<sup>st</sup> to 6<sup>th</sup> July 2018 and it was attended by 40 countries from around the world. In addition, South Africa was represented by 2 schools, namely Empangeni High School with 5 learners and 4 presentations from George High School with 2 learners having 1 presentation. The theme for the year's GLE was Mountains Woods and the Water.

The trip to Ireland began a short detour to the Department of Science and Technology offices in Pretoria on Thursday 28 June 2018, where learners presented their projects to the science promotion team as well as few NRF-SAASTA representatives in preparation to their journey abroad.



Image: The support team and the learners at the DST offices

# Day 1

The 22<sup>nd</sup> GLOBE annual meeting took place at the Brehon Hotel from 8:30am and Dr Tony Murphy and Dr Jullie Malmberg conducted it. In this meeting, reports from different working groups were presented.

# Day 2

The official opening of the GLE 2018 was made and a number of keynote speakers gave their talks. The highlight of the day was when one of the learner keynote speaker, JoyAnn Maina, from Nairobi, Kenya who is a grade 7 learner gave her talk. She indicated how GLOBE gave her the opportunity to interact with the environment and how it gave her the platform to participate in major events.

# Day 3

In the morning, learners were divided in to groups and they left for their field site activities.

In the afternoon concurrent learner presentations continued and that was followed by another cultural evening.

# Day 4

Learners left in the morning for their field experiences and the afternoon was given as a free time.

Our learners went for bike riding in the garden of the Killarney House.

# Day 5

Learners left in the morning for their field experiences and in the afternoon learners continued with their presentation. On this day, the learners from Empangeni High did their presentations

In the evening, a banquet dinner was set.

# Day 6

There was only one activity named storytelling, videos and pictures taken by the learners during their field activities were shown, and the GLE 2018 was officially closed.

In the afternoon, learners were given time to do some shopping.

# South African learners presented the following abstracts:



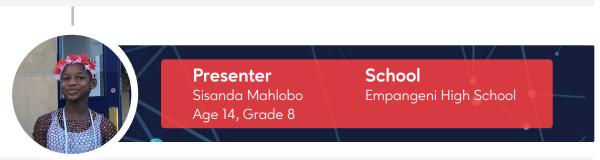
#### Abstract

Relation of Mosquito-Borne Diseases and Malaria (Mosquitos are responsible for the transmission of several harmful diseases, infecting masses of people and are the sources of 1 million deaths each year. Mosquito is the deadliest animal, and the disease is spread biologically (through mosquito bite) globally, due to change and climate change and global development status



#### Abstract

Water extraction, filtration and defluoridation: (Many of the African countries experience problem of excessive fluoride in drinking water. Household treatment units do not completely remove the concentration level of fluoride in the drinking water. In combining well known extraction, filtration and de-fluoridation methods, this project intend to create a 3 stage system, to provide clean water for human consumption)



#### Abstract

Use of filters to clean and purify the rainwater that enters the dams during the floods (Floodwater becomes detrimental to the environment as it washes away the soil and destroy habitats. Building underground water tunnels to store the floodwater that was purified using the using specialized filters would maximise availability of fresh water during droughts while barriers along the riverbanks would minimise the damage to the environment.



#### Abstract

Extraction of Fresh Water from the sea bed aquifers (large quantities of low-salinity water trapped beneath the ocean floor could provide drinking water for countries like South Africa that faces water shortages. This project explores possible extraction of fresh water from huge aquifers beneath the ocean floor by drilling through the seabed from offshore platforms like the oil RIG.



#### Abstract

Creating clean and pure water for human consumption in Ezimbeni Area: (Watertighting the three pits situated above lake Mbukwini, near uMfolozi river, by lining them with clay and redirect the water in to the lake for the purification can increase the amount of clean water available for human consumption in Kwa Zulu-Natal rural areas where untreated drinking water is a major concern.)

# **National Science Olympiad and school Competitions**

The year 2018 marked the 54<sup>th</sup> year that the National Science Olympiad and Competitions has been in existence. Out of over 33 000 learners who participated in the event only the top 100 performers in the National Science Olympiad were invited to participate National Youth Focus Week.

Structured in such a way that STEM careers and industry are profiled, the top performers had privilege to engage with industry experts and visit various industries in honouring and celebrating excellence. "The main aim of the competition is to identify talent, to encourage excellence in science education and to stimulate interest in the sciences. It seeks to inspire young people to consider careers in science and technology," said NRF-SAASTA Managing Director, Dr Jabu Nukeri.

In resonance of the tone of Dr Nukeri, Mr Mashego Mashego Executive Director of Harmony Gold Mining stressed that industries are in need of talented young minds and emphasised the importance of absorbing bright young minds in key organisations.

Well over 33 000 learners participated in the 2018 National Science Olympiad and Competitions. Ranging from grade 10 to 12, learners wrote either the Physical Sciences or Life Sciences paper on 01 March 2018.

The three top achievers were awarded with an opportunity to attend the London International Youth Science Forum in August 2018. Through the National Science Olympiad, the three top learners attended a lecture by Mark Shuttleworth and Professor Philip Moriarty focusing on nanotechnology.



Image: Left: Group Executive: Science Engagement and Corporate Relations at NRF, Dr Beverley Damonse, with National Science Olympiad winners of the London International Youth Science Forum trip, from left; Precious Kaunda-Mpumalanga, Josephine Tsubane-Free Statement, Graham Mitchell –Gauteng and Aleta Sibi-Eastern Cape.



Image: SADAC learners at the National Science Olympiad awards ceremony.

# AstroQuiz<sup>™</sup> Competition (Grade 7)

The AstroQuiz Competition focuses on Astronomy and learners participate in groups of four in knockout rounds that lead to a final round. The first rounds are at provincial level and winners proceed to national level competitions for final round.

AstroQuiz<sup>™</sup> that focuses on Astronomy content. A total of nine grants were to the following institutions to implement the competition: Grahamstown Foundation / Scifest – Eastern Cape; Moipone Academy – Gauteng Province; SALT - South African Large Telescope – Northern Cape Province; South African Astronomical Observatory – Western Cape Province; North West University – Northwest Province; Penryn Trust T/A Penreach – Mpumalanga Province; Rural Education Festival – Limpopo; VIP Print (PTY) Ltd – Free State Province; and University of Zululand Foundation – Kwazulu Natal Province.

These grant holders engaged with other science engagement institutions and all together, they were 24 organisers. Collectively, 8 056 learners were reached from 2 014 schools in 52 district municipalities across all the nine provinces of South Africa.

The National Awards was hosted from 1- 2 October. Before awarding the learners for their efforts, they were treated to tours to facilities at Ditsong National Museum of Natural History, NECSA, SANSA as well as skype with a European Space Agency (ESA) astronaut Luca Parmitano

The day culminated with an evening award ceremony, led by a young and vibrant master of ceremonies Abraham Gentsu, who welcomed the guests and gave a reminder that the evening was to celebrate the learners' hard work.

Founder of Mathemaniacs, Ms Mabatho Mokiti, the motivational speaker of the night, shared her love for math and how it opened so many opportunities for her including her own business, which led into other businesses too. She furthermore encouraged learners to focus on their education and follow their dreams.

Both the learners and their educators received as prices, laptops, trophies, medals from NRF/ NRF-NRF-SAASTA. The Italian Embassy topped the prices and gave telescopes & bags for position 1, plasma balls and bags for position 2, bags for position 3 and mugs for all other leaners.



Image: Interactions at Ditsong Museum

Image: Interactions at NECSA

Image: Skype with Luca, the ESA astronaut



Image: Position 1, AstroQuiz 2018 National Winners: Hennenman Premere, FS

Image: Position 2: Ncotshane Primary, KZN



Image: Position 3, Position: Laerskool Voorpos, GP



Image: All AstroQuiz 2018 provincial winners and representatives from the Italian Embassy





Image: All AstroQuiz 2018 provincial winners and representatives from the Italian Embassy



Image: All AstroQuiz 2018 provincial winners and representatives from the Italian Embassy

# SCIENCE AWARENESS PLATFORM DIVISION

# **Capacity Development in Science Centres**

#### Japanese Oversees Volunteer Corporation (JOVC)

The year marked the first of three years after an extension of the short-term volunteer programme coordinated by the Japanese International Cooperation Agency (JAICA). . The purpose of the programme is to promote science through the presentation of simple science experiments. Three short-term volunteers, Mr Takeru Murakami, Mr Masaru Shibuya and Mr Tomoyuki Tokutake spend a month in South Africa (SA) sharing their expertise with learners and science centre personnel. The learner workshops took place in the Northern Cape (Kuruman and Kimberly), - a maximum of two schools were reached per day for the whole duration. A week later, they facilitated the learner workshops at Moipone Academy, in Tembisa, Gauteng Learners showed more interest in science, after each presentation and the teachers testified that they also learned from the intervention as it gave those ideas on how to improve on classroom experiments. One of the schools reached in Kuruman was a school with special needs, and it was well received.

The science center representatives were given the opportunity to experience hands on approach on various experiments. The response was positive as this; they said would help them remember how to perform the experiments learned when they get back to their science centres. In doing so, they respond to one of the aims of Science Engagement Strategy which requires an increase in awareness about science, and how to make science fun, or more appealing, or support educational programmes. These activities also aim to encourage critical thinking about, and engagement with scientific issues among the public. Not only do learners and science centre personnel benefit from the JOVC workshop – educators from schools in previously disadvantaged areas learn ideas on how to improvise by performing fun experiments using ordinary household material to explain scientific concepts in the curriculum. This is therefore one of the programmes that we used to promote science communication that will enhance science engagement in South Africa.

We reached 1734 participants in the Northern Cape only. The following is a breakdown of schools reached in Northern Cape:

- Nine schools in Kuruman
- Three schools in Barkley West
- Four schools in Kimberley and

We reached 34 science centres from all over the country – they attended JOCV workshop in Gauteng.



Image: Science Centre staff conducting experiments during the JOVC workshop.

# **Festivals Highlights**

• Scifest 2019 festival

The 2019 festival took place in Grahamstown, Eastern Cape from 6 - 12 March 2019 under the theme "Discover your element".

The theme celebrated the International Year of the Periodic Table of Chemical Elements as proclaimed by the United Nations. The theme also celebrated several anniversaries in the history of chemistry including the 150th anniversary of the periodic table's creation by Dmitry Mendeleev in 1869, 350 years since the discovery of phosphorus, the categorisation of 33 elements in 1789 by Lavoisier's, and Döbereiner's law of the triads in 1829.

A team of four represented the NRF-SAASTA Science Awareness division and the exhibition included interactive science exhibits, interactive video displays and the popular mobile planetarium. The exhibition included a new giant chess set exhibit where learners from different schools and publics challenged each other to matches. In keeping with the theme, each winner was awarded a pocket periodic table of elements and bragging rights.

• The 2nd Annual Youth in Science, Technology and Innovation Indaba

The second Annual Youth in Science, Technology and Innovation Indaba, organised by the Department of Science and Innovation and Department of Labour (DoL), was held at Nasrec Expo Centre in Johannesburg on 15 June 2018.

#### The objectives of the indaba were to:

- Reflect on the outcomes of the inaugural Youth in Science, Technology and Innovation Indaba and the implementation of its action plan.

- Provide a space for young people to forge and strengthen linkages with policy makers, funders, tech-entrepreneurs and researchers.

- Provide a space for young people to influence the content of science, technology and innovation (STI) policy in South Africa.

- Assess the alignment between the DST's youth policy interventions with the objectives of the NYP, NDP and other relevant state youth interventions; and

- Assess the alignment of South Africa's STI policy interventions with those of the AU, SADC, BRICS and other relevant multilateral bodies.

NRF-SAASTA coordinated exhibition stands, together with other DST entities such as the Technology Innovation Agency, Academy of Science of South Africa and South African National Space Agency. The exhibitors engaged the youth on DST's initiatives such as the National Youth Service (NYS) volunteer programme and the DST|NRF Internship programmes as the department's interventions addressing unemployment and skills development amongst the youth. Career profiling and advice was given to both the learners and tertiary students who attended the event. Apart from these engagements, the visitors interacted with the various science-based exhibits demonstrating scientific phenomenon to stimulate interest and curiosity in science, technology and mathematics. The HySA PADEP further organised the participation of HySA Centres of Competencies from Mintek, North West University and University of Western Cape at this event, with the HySA CoCs exhibiting alongside with the DST entities. Thus, through this intervention, all the set objectives were achieved.

# National science week (NSW) 2018/19 highlights

Out of the 105 applications received for NSW, a total of eighty-one (81) grant holders of which eleven (11) were new grant holders were approved and supported to roll out activities for NSW across the country.

#### These grant holders are categorized as follows:

- 6 NRF Facilities (SAEON EC; SAEON LP; SAEON NC; SAEON WC; SAAO; iThembaLabs)
- 5 Science Councils i.e. SANSA GP; SANSA WC; NECSA; SAMF, SAIP)
- 21 Science Centres
- 6 Universities (UniSA; Wits; VUT, MUT, NMU, UWC)
- 4 Museums
- 39 Independent organizations
- How about the Department of Education and other government department?????

#### The NSW launch

The honourable Minister of Science and Innovation, Ms Mmamoloko Kubayi-Ngubane launched the National Science Week, on 28 July 2018 at the University of Mpumalanga in Nelspruit. In her address, the Minister encouraged learners and members of the general public to read about the fourth industrial revolution and find the role they can play; choose careers that will have an impact on their lives, as well as in their communities and the overall economy of the country.

Role models in geology, mechanical engineering, and chemistry shared their story to stimulate interest in STEMI careers throughout the region in schools. In addition, the University of Mpumalanga engaged five local schools with activities and campus tours, as well as provided information on fields of study in SET.

# Don't be afraid to study science

#### By BULELWA GININDZA

SCIENCE and Technology Minister Mmamoloko Kubayi-Ngubane has encouraged young people to pursue careers in science.

She was addressing pupils at the University of Mpumalanga in Mbombela on Saturday at the launch of National Science Week.

Kubayi-Ngubane was accompanied by Education MEC Sibusiso Malaza.

"Many people make it sound as if science is complicated," she said.

"The simple things we see every day are a result of science.

science. "That's why we're here to expose you to careers in the sector." Minister Mmamoloko Kubayi-Ngubane (centre) says the sciences offer job security. Photo by Bulelwa Ginindza

She said young people were expected to come up with new ideas. "You must understand the

"You must understand the impact of the careers you choose to pursue," said Kubayi-Ngubane.

"Most of the jobs people do today won't exist in the future."

She encouraged the pupils to start preparing themselves for the future.

The minister said careers in the science field would always

Inspiring the Youth: National Science Week in the media

exist, and that South Africans needed people who could build robots.

National Science Week is an annual science, technology, engineering, maths and innovation celebration.

■ The annual event is open to pupils and to members of the public.

It includes workshops, science shows and lectures.

National Science Week started on Monday and ends on Friday.



Image: Mogodumo Primary school learners in LP learning about bubbles



Image: A learner tracing his steps using a dizzy viewer



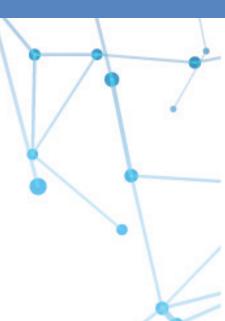
Image: Learners learning about planets at KZN science centre



Image: Never too early to attend NSW.

NRF-SAASTA 2018/19

# SCIENCE COMMUNICATION DIVISION



# Young voices in science on the global stage at FameLab® International

Participants from 27 countries around the world came together in Cheltenham in the UK for the 2018 FameLab International Competition. The science competition formed part of the Cheltenham Science Festival, which took place between 4 and 8 June 2018.

Representing South Africa was the winner of FameLab South Africa, from the University of Free State, Emmie Chiyindiko, accompanied by Ntambudzeni Tsishwaise from British Council South Africa and Joanne Riley from NRF-NRF-SAASTA, who was invited to judge one of the semi-finals.

Although FameLab takes the format of a competition, one of its invaluable characteristics lies in the conversations that happen off-stage, the vibrant interactions and exchange of stories of science, research and life in general from different cultures around the world. The established networks and friendships continue well beyond the end of the competition.

On 6 June 2018, 27 national winners participated in three semi-finals, with 12 final participants selected by a panel of judges and an audience vote, to talk at the international finals on 7 June 2018. Chiyindiko did not proceed to the international finals, but proudly represented the African continent as the only African participant at this year's competition.

The format of the FameLab competition requires participants to present a scientific topic or concept to a panel of expert judges in a time of no more than three minutes. The challenge is that talks are judged on content, clarity and charisma, and should be accurate and informative but also entertaining and original, all while making sure they are accessible to public audiences.

Winner of the 2018 FameLab International competition is 33-year old Biological Science lecturer from Malaysia, Siti Khayriyyah Mohd Hanafiah. Her winning talk focused on tuberculosis control, convincing the judges through her calm and engaging presence on stage, her excellent storytelling skills and her clarity of content. The judges included science writer and broadcaster, Vivienne Parry, Professor in Physics and Astronomy, author and science communicator, Clifford Johnson and Acting Creative and Partnerships Lead at the Welcome Trust, Farrah Nazir.

Awarded second place were two runners-up; representing Australia, from Macquarie University, Vanessa Pirotta, and representing Germany, from Heidelberg University, Veli Vural Uslu. The audience vote winner was Mihnea-Ioan Nicolescu from Carol Davila University of Medicine and Pharmacy in Bucharest, who represented Romania.

The 2018 finals featured participants from Malta, Kazakhstan, Qatar, Poland, Greece, South Africa, Egypt, Italy, Ireland, Malaysia, Bangladesh, Thailand, Portugal, UK, Netherlands, Korea, Czech Republic, Bulgaria, Germany, Switzerland, Hungary, Brazil, Spain, Romania, Cyprus, France, and Australia.

Since its inception in 2005, FameLab has grown into the world's leading science communication competition. Through an international partnership with the British Council and many national partners, the competition has grown globally with more than 10,000 young scientists and engineers participating to date. In South Africa, FameLab has been made possible through a partnership between the British Council, NRF-SAASTA and Jive Media Africa.



Image: Winner of FameLab South Africa, from the University of Free State, Emmie Chiyindiko

# The NSW focus week

Preceding the launch was the focus week from 30 July – 4 August in all the nine provinces of South Africa. All 81 grant holders and 8 organizations and 2 other independent organizations, Cosmo City's Boys and Girls Youth Africa (BGYA) in collaboration with Cosmo City Sport and Recreation & Outlook Foundation (at their own costs) (reached 396 Grade 7 learners from 2 primary schools in Cosmo City) & Lasec.

The NSW 2018 theme was "Advancing science through democracy". The implementation of this project was aligned to the theme which looked at how STEM activities has been rolled out since 1994 and what improvements/changes, in relation to science, has people seen/ experienced in the country. Activities included, amongst others, industry visits, scientific content-focused workshops, interactive research activities and exhibitions.

# Youth Science and Technology Journalism Programme (YSTJ) Highlights

The Youth Science and Technology Journalism Programme (YSTJ) interns are placed in community media outlets across the country and their main responsibility is to produce science and technology stories in indigenous languages. The YSTJ Programme aims to communicate science and technology stories in all the South African indigenous languages and to promote interest in science and technology amongst the disadvantaged youth. The programmes strives to ensure that scientific information is accessible to all South Africans.

Through this programme, the community media outlet for a one-year science journalist internship hosts unemployed graduates (18 to 35 years of age) in science and technology, communications or journalism. The South African Agency for Science and Technology Advancement places the interns at specific community media organisations in identified municipalities to produce stories for broadcast, online and print media about science, technology and innovation (STI). The interns are responsible for developing popular articles about specific technologies piloted in local communities, as well as innovations developed within these communities.

In the previous financial year, the previous interns produced 1 171; (830 stories) in science and technology, (340) are general stories and (1) is Innovation Partnership for Rural Development Programme (IPRDP).

The media coverage were generated in all eleven official languages including isiZulu, isiXhosa, English, Sepedi, Tshivenda, Afrikaans, Setswana, Sepedi, Tshivenda, isiNdebele, and Xitsonga representing a diverse coverage of the different languages in South Africa.



Images: Class of 2018/2019 Science and Technology Youth Journalism Programme



Bridget Lepere a young upcoming science journalist has a good foundation in journalism. After completing her studies, she worked as a community media journalist for both radio and print. This experience gave her a strong foundation and prepared her for a great career in journalism.

Despite her experience in the community media, there was something missing. She yearned for a career in science journalism. Her thirst for science journalism was unquenchable. She wanted to get into science journalism field. "I always had an interest in science journalism, but I didn't know how to go about it or where to start," she said.

After completing her studies at the Tshwane University of Technology, it was not easy for her to secure a job in journalism. A lucky break for Bridget came when she spotted an opportunity to become an intern at the South African Agency for Science and Technology Advancement (NRF-SAASTA), through the Youth Science and Technology Journalism (YSTJ) programme. She tackled this opportunity head on with passion and zeal.

"NRF-SAASTA became my stepping stone, it opened the door for me," said Lepere. "The YSTJ programme enabled me to get in touch with people who had the know-how".

After making the switch to science journalism as an YSTJ intern, she began honing her science journalism skills, taking it one story at a time while producing content for Voice of Wits as a science journalist intern.

She gained experience as a content producer at Voice of Wits (VOW) FM, a job that sometimes forced her to work outside her comfort zone. "At some point I had to co-host the show, which was something that was out of my comfort zone, but I did it because that's how I grew and got better," she said.

Only two years into her science journalism career Lepere is still working hard and honing her skills and it is paying off. Last year, she was nominated for the prestigious Liberty Radio Awards, which are regarded as the 'Oscars' of South African radio industry. "It was a great honour for me to complete amongst great radio personalities and to have my work recognised as quality," she said.

For her most recent tenure at the Wits Radio Academy, through VOW FM, nourished her insatiable passion for science journalism. She works as a content producer for a science show and another current affairs show- Breaking Ground, while managing and editing news.

Apart from her role as a content producer and news editor, she is also responsible for training community media practitioners to produce high quality shows. Furthermore, she also provides them with training for reporting news, science stories and overall competency in their newsrooms.

Not all this experience means that she has stopped learning and improving as a science journalist. "I have set a high bar for myself and I need to push myself to ensure that I don't drop that bar.," said Lepere.

Lepere returned in November this year to NRF-SAASTA to facilitate a radio science journalism workshop for the new crop of YSTJ interns. For her this experience has been the most beneficial of them all. "Passion is everything, you need to tell stories with heart that are engaging and are conversational. For Science you need to tell stories that people do not feel like they are too removed from somewhere but the stories need to be relatable. Be open to growing and learning," she advised.

Speaking at the workshop, Zamuxolo Matiwana, YSTJ leader, spoke fondly of Lepere about her work ethic and how she grab the opportunity and ran with it. Zamuxolo was overjoyed to see one of the former interns giving back to the programme. "It's a wonderful feeling to see the impact the programme has had on young people's lives, such as Bridget," he added.

He challenged the new crop of interns to work as hard as Bridget had during her tenure in order to utilise this opportunity to open doors for themselves in the future.

Lepere's long-term goal is to create a platform for herself in order to continue informing people about science moreover about health and environmental issues. "I hope to continue playing a role in telling scientific stories," she said. With her commitment and drive to contribute in bringing awareness about science to communities, it comes as no surprise that Lepere is on the rise to becoming one among the few future science journalists in this country. Watch the space...

### 30th IPHE Steering Committee Meetings and Related Events

The Department of Science and Innovation (DSI) in partnership with the South African Agency for Science and Technology Advancement (NRF-SAASTA) welcomed a group of international policy makers, researchers and scientists and experts in Hydrogen Fuel Cell Technologies (HFCT) to South Africa for the 30<sup>th</sup> edition of the International Partnerships in Hydrogen and Fuel Cells in the Economy (IPHE) Steering Committee Meetings and Related Events from the 4 to 7 December in Pretoria. The annual event aimed at creating a platform for partnership and relationship building between government, private companies including universities to pitch programmes and research.

#### About IPHE

IPHE is an inter-governmental partnership consisting of nineteen partners, established in 2003 with the main intention to facilitate and accelerate the transition to clean and efficient energy and mobility systems using hydrogen and fuel cell technologies. It is committed to advancing the commercialisation of hydrogen and fuel cell technologies with the goal to enhance the security and efficiency of their energy systems, to address environmental objectives and economic growth. The partnership further provides an environment conducive for the sharing of information on policies and technology status, together with initiatives, codes, and standards to accelerate the cost-effective transition to use hydrogen and fuel cell technologies in the economy. South Africa, through the DST's Hydrogen South Africa (HySA), is the sole Africa representative within the partnership, with the NRF-SAASTA managed HySA Public Awareness initiative part of the IPHE's Education and Outreach Working Group, which is responsible for public awareness, sharing of information between members and convening outreach events e.g. Hydrogen and Fuel Cell Day, webinars, fact sheets. The HySA Public Awareness create awareness, visibility and acceptance amongst the public, industries, entrepreneurs and key decision makers in SA about the challenges, benefits and safety of using HFCT in the alternative energy industry.

Hydrogen is used as an energy carrier, which stores and delivers energy in a usable form. Fuel cells use hydrogen to generate electricity, producing water and heat as by-products. HFCT is more favourable as the primary source of energy in South Africa, coal, is neither environmentally friendly nor sustainable. The shift towards less carbon-intensive energy sources is not unique to South Africa, but is a global phenomenon that South Africa has to accept and innovate towards in order to remain globally competitive. In light of this, South Africa has established a HFCT research programme guided by the National Hydrogen and Fuel Cell Technologies (NHFCT) Research, Development and Innovation Strategy, branded the HySA programme. The HySA programme is a 15-year Research Development and Innovation initiative by the DST approved by government in May 2007 and formally launched in 2008. To implement the strategy, three HySA Centres of Competence were established (HySA infrastructure, HySA catalysis and HySA systems) to promote proactive innovation and create human resources required to develop future industries in the HFCT field. The strategy stimulates and guides innovation along the value chain of HFCT in South Africa, aiming to position the country to drive and optimise local benefits from supplying high value-added products (i.e. PGMs) to the potentially increasing international markets.

# Steering Committee Meetings and Related Events (DSI Communications)

The 30th IPHE Steering Committee Meetings and Related Events were a series of engagements, which comprised of four meetings / events, (1) IPHE Inter-Governmental Roundtable, (2) IPHE Education and Outreach, (3) IPHE Industry Forum, (4) IPHE Steering Committee Business Meeting and (5) Ministerial Engagement and Site Visits.

The Inter-Governmental Roundtable saw leading IPHE countries in this technology, sharing policy and legislative frameworks and technology developments that would be favourable to HFCT development for South Africa. Senior government officials from Mineral Resources, Transportation and Trade and Industry attended this roundtable for the IPHE delegation to convey why a shift to HFCT is a viable and attractive alternative for South Africa and why these departments need to support the DSI's HySA programme. Besides its role in the beneficiation strategy championed by the Department of Mineral Resources, the programme is further poised to contribute to the energy mix solutions as a long-term energy solution to energy challenges and the recently launched Green Transport Strategy of the Department of Transport.

The IPHE Education and Outreach meetings half-day event provides an opportunity for students to meet inter-national experts and IPHE delegates, and, to exchange views and information on the developments in FCH technologies including an overview of the current technical and market status of FCH in different countries. Delivering the opening address at this meeting, Dr Sunita Satyapal, Chairperson of the IPHE from USA, highlighted recent activities and progress taking place in many IPHE countries. "This is an unprecedented time in history, we have for the first-time commercial fuel cells, we have commercial cars that are being sold to regular customers and thus far about ten thousand worldwide, where there is quarter of a million stationary residential fuel cells just in Japan alone, and this is just an example of a factory put together by IPHE in the many countries around the world." South Africa's HySA CoCs presented local research, development and innovative projects to the IPHE steering committee, academia and industry. This was followed by poster presentations by postgraduate students at the HySA CoCs and universities in country conducting research in this technology.



Image 1. DST Minister: "DST's Minister Ms Mmamoloko Kubayi-Ngubane with a selected group of international delegates at the Ministerial-IPHE Meeting"

## Increasing the Role of Hydrogen in the Economy

South Africa has been a member of IPHE since 2010 and the partnership presents an excellent platform for the country to form and strengthen collaborations that will drive the local development of the fuel cell market. Speaking at the conference, the Director-General of the DSI, Dr Phil Mjwara said South Africa welcomed the opportunity to highlight the evolution of its HFCTs sector. The implementation of HySA a flagship initiative of the Department a decade ago, translated into the development of the National Hydrogen Fuel Cell Technology Research, Development and Innovation Strategy.

"The HySA programme seeks to diversify, promote the green economy and to reduce greenhouse gas emissions under the Paris Agreement, while ensuring a just transition as encapsulated in the country's, National Climate Change Response White Paper. The programme transitioning from research, development and innovation to a manufacturing capability, as well as developing strategic partnerships with the private sector will be critical," added Dr Mjwara.

Dr Mjwara further said that, public-private partnerships support is envisaged to increase and cover gaps in technology commercialisation funding. "A sovereign innovation fund that is going to be created to leverage

Co-investment by the public and private sectors will be relevant to the fuel cell sector uptake of locally developed technologies in both the local and global markets," concluded Dr Mjwara.

The Chairperson of IPHE, Dr Sunita Satyapal, said their objective was to foster global collaborations, accelerate progress and enable widespread deployment of HFC technologies across sectors. IPHE focuses on energy security, resilience, emissions reduction (carbon and air pollutants) and economic prosperity. "IPHE members collectively invest nearly \$1 billion a year in HFCs. There are 10 000 commercial fuel cells cars and over a quarter of a billion HFC stationary systems that can operate directly with natural gas," affirmed Dr Satyapal. According to Dr Satyapal, the industry projected the potential of two and half trillion dollars in revenues just for hydrogen fuel cells, creating 30 million jobs worldwide.

Representing industry at the conference, ENGIE, a global energy provider that operates in 70 countries with

155 000 employees, committed to a long-term innovation solution. Its main objective is to diversify and grow through its key sectors; natural gas, power and energy services with a focus on renewable sources. Locally this means investment in solar technology and reduction of brown coal use. In 2016, the group announced the Kathu Solar Park project in the Northern

Cape and signed a 20-year power purchase agreement with Eskom. Kathu Solar Park is a 100 MW Greenfield concentrated solar power plant situated 280km from Kimberly with parabolic trough technology and equipped with a molten salt storage system that allows 4.5 hours of thermal energy storage and thus limits the intermittent nature of solar energy. Last month, the power plant was synchronised to the national grid and is expected to enter into full commercial operation in 2019. The project supports South Africa's strategy of increasing the contribution of renewable sustainable energy generation and will create approximately 1 200 jobs during the construction phase. Koen Langie, Senior Project Manager: Hydrogen in the Economy and Mining Applications at ENGIE is a French company, called for increased scale up, to meet the target of zero emissions.

The forum was concluded with Minister Kubayi-Ngubane's meeting with a select group of IPHE delegates before they embarked on site visits to Mintek, Chamber of Mines, Impala Platinum Refineries, Poelano High School, HySA Infrastructure Centre of Competence – North West University and Mponeng Mine. Minister Kubayi-Ngubane assured the IPHE members that South Africa had made a commitment to reduce green emissions by 34% in 2020 and 42% by 2025. The Minister indicated that South Africa should be working towards developing a hydrogen and fuel cell technology plant.

More than 100 delegates from government, industry and academia attended the forum. Students, researchers and exhibitors exchanged information with international experts on the developments in HFC technologies, including an overview of the current technical and market status of HFC in different countries. Delegates agreed that more commitment to public-private partnership would unlock hydrogen and fuel cells potential across economic sectors and reduce carbon emissions.



Image 2. DG and DDG: "DST's Director General Dr Phil Mjwara and Deputy Director-General, Mr Mmboneni Muofhe (second and third from right) with HySA Systems and Infrastructure researchers and specialists.



Image 3. IPHE\_PTA\_HySA (72) - Ms Stephanie Byham from USA interacts with Mr Samuel Modise from HySA Infrastructure at North West University.

## Young Science Communicators Competition introduces an indigenous language category

The competition challenges young scientists and researchers between the ages of 18 and 35 to communicate their research to a larger audience beyond their scientific peer community. This provides an opportunity for young scientists, who may not have had previous opportunity or incentive to communicate their work more broadly, to gain exposure in science communication. The competition has five categories: a written newspaper article, a radio recording, a video, an open category and now an indigenous language category. An important part of the competition is to provide constructive feedback to participants and so develop their science communication skills. The Young Science Communicators Competition introduced an indigenous language category to encourage young scientists to communicate their research in their vernacular

NRF-SAASTA also supported participants from the previous Young Science Communicators Competition to improve their science communication skills and knowledge to attend the online science communication course offered by Stellenbosch University. The participants all completed and passed the course and their final video assignments were submitted to NRF-SAASTA as per the terms of the agreement with NRF-SAASTA. The ten participants were:

- 1. Sabeedah Vawda University of Free State;
- 2. Clarissa Van Der Loo University of Johannesburg;
- 3. Tlou Masehela SANBI
- 4. Carri-Ann Bloom Nelson Mandela University;
- Simone Richardson University of Witwatersrand/National Institute of Communicable Diseases;
- 6. Michael Bodunrin University of Witwatersrand;
- 7. Kerryn Warren University of Cape Town;
- 8. Anya Eilers Stellenbosch University;
- 9. Darryl Herron University of Pretoria; and
- 10. Valentine Saasa CSIR

The entries for the 2018 competition closed on 23 November 2018. 238 entries were received across the five categories. Judging took place over December and January and winners were announced in February as follows:



www.saasta.ac.za





## Article category:

First place: Michél Strauss - Spilling the "salt" on a shaky situation
Second place: Yashini Naidoo - Superbugs: The end of an antibiotic era?
Commended: Mpho Mosia - A diary entry by cell-free DNA
Commended: Jonathan Botha - Growing money on trees: Cellulose and its role in the bio economy
Commended: Karla Alujevic - Not too hot, not too cold: A lizard's struggle to find that "just right" in the face of climate change

Commended: Carri-Ann Bloom - Indigenous Knowledge Systems: Why Local is Lekker.

# **Open Category:**

First place: Molly Czachur - Finding Fish
Second place: Julia Davies - The Streets Beneath
Commended: Amica Muller-Nedebock - DNA. Why does it matter anyway?
Commended: Nomawethu Hlazo - The Fossil Chronicles Comics

# Audio category:

First place: Marike Louw - Rainbow Nation on a Sub-Antarctic Island Second place: Ntanganedzeni Ramugondo - Are Drones the Future for Africa?

## Video Category:

First Place: Darryl Herron - Imagine South Africa without trees Second place: Marike Louw - Denizens of Marion Island

## Indigenous Language Category:

First Place: Chwayita Ncedana - Ubukrelekrele be ndalo-akulahlwa mbeleko ngakufelwa (isiXhosa)Second place: Humbelani Muofhe - Oh, No gudela zwa matombo

# Winner Young Science Communicators competition, Writing category

#### Spilling the "salt" on a shaky situation

#### **Michél Strauss**

It needs more salt! A common phrase uttered around the dining table of most. For what harm lies in an extra pinch of salt here or there?

Cardiovascular disease! A damaged heart and blood vessels! The mere thought of tackling a leading cause of non-transmittable disease related deaths, not only in Africa, but globally, seems overwhelming. It would appear that one needs a big solution for a big problem.

However, despite medical advances allowing more effective pharmacological approaches to decrease cardiovascular disease, it remains an obstacle in areas where poverty or limited access to health care prevails.

For thousands of years salt, an ionic compound comprised of sodium and chloride, has been used as a preservative and seasoning agent in food. While accessibility to processed foods have attributed to an increase in dietary salt intake, the sodium content of several staple foods, including bread, cereals and margarine, have also been identified as being excessively high.

Despite the already high sodium content of processed foods, many of us still have the habit of adding extra salt at the table or during cooking. This leads to the question of how many South African are informed about the salt content of their food, and the health risks associated with something as small as our habitual salt use.

Therefore, more attention has been brought to achievable health strategies that will be beneficial to all - including diverse and far-reaching communities.

A big solution starts with a change in small habits.

# Cardiovascular risk: rubbing salt into the wound

Scary statistics from 2010 indicated that almost 1.65 million cardiovascular disease related deaths, globally, were attributed to a high salt diet. However, how does that extra pinch of salt influence your cardiovascular health? In addition, how much is too much?

Both sodium and chloride, that make up salt, play essential roles in the regulation of various physiological systems from cellular to kidney and heart function. The current recommendation from the World Health Organization (WHO) is less than 5 grams of salt per day. The global salt intake is however, almost double this amount. In South Africa, the daily salt intake is approximately 8.5 grams per day.

The most widely described risk associated with excessive salt intake is high blood pressure, also known as hypertension. From a pathophysiological point of view, this is resultant of an increase in blood volume (water retention following high salt intake) that increases the pressure in your blood vessels. This also increases the amount of blood that returns to your heart and will be pumped through your circulation – therefore increasing your heart's work rate. Amazingly, our bodies are equipped to maintain a healthy environment via the inter-regulation of several physiological systems to once again lower this pressure and your heart's work rate. At some point, however, these systems become dysfunctional and the protective mechanisms are lost – increasing the load on your cardiovascular system. Additionally, salt may cause blood vessels to become stiff – thereby contributing to high blood pressure. Intriguing new evidence even suggests that salt affects the gut bacteria that may play a role in hypertension development.

# South Africa on the forefront: be part of the solution

With the alarmingly high salt intake and the undeniable cardiovascular risks, it is unsurprising that global leaders from the United Nations and the WHO acknowledged salt reduction as a priority. Few countries including South Africa (the first African country) have implemented mandatory sodium reduction legislation, lowering the sodium content of staple foods, in an effort to reduce daily salt intake.

Interestingly, in South Africa, a 0.85-gram salt reduction could prevent approximately 7400 strokes and heart attacks per year. Thus, South Africa is on the forefront when it comes to taking on a more sustainable solution to improve the national burden of hypertension and cardiovascular disease, of not only the wealthy but also all South Africans.

Taking into consideration all of the above, our habits remain in our hands, and it is up us to make the cautious decision about our salt use and cardiovascular health.

A little food for thought: think twice before adding that extra pinch of salt.

# About the Author:

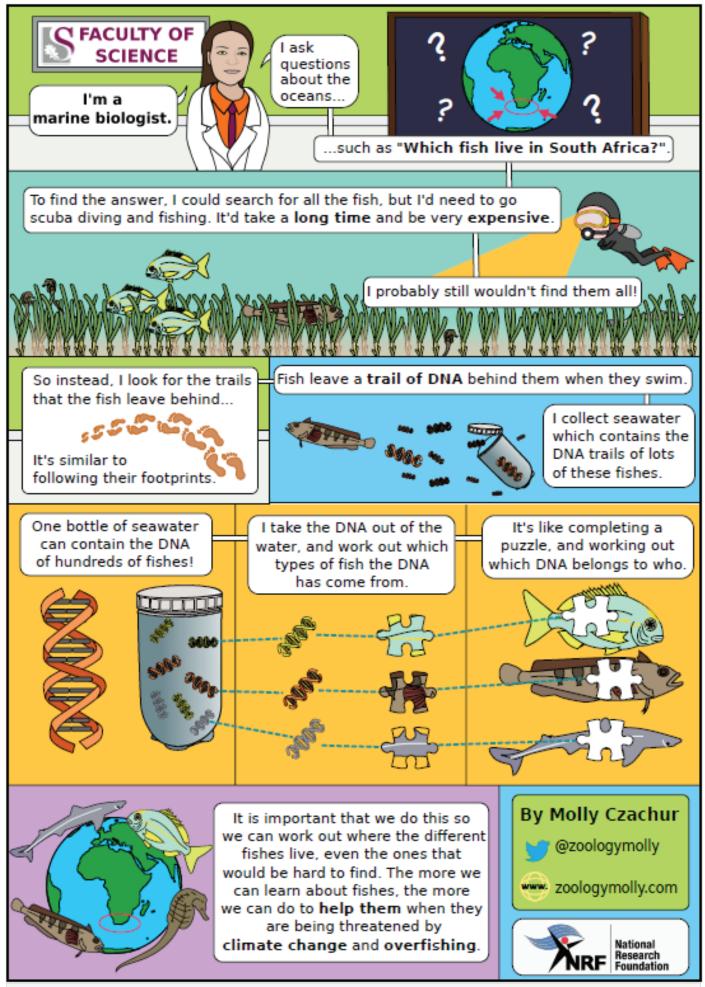


Michél Strauss is currently completing her PhD degree in Physiology at North-West University. Her research is centered on gaining a better understanding of the development of cardiovascular disease, with the focus on black South African populations.

When she started her postgraduate studies, she was met with the harsh reality of the shocking statistics pertaining to cardiovascular morbidity and mortality rates not only globally, but also in South Africa.

She says she was fortunate to be welcomed into a research group at the Hypertension in Africa Research Team (HART), where she was able to meet experts, including Prof Alta Schutte - the SARChI Chair in the Early Detection and Prevention of Cardiovascular Disease in South Africa, who are committed to understanding the complex physiological mechanisms contributing to cardiovascular disease.

Her research forms part of the African-PREDICT study, which aims to identify and highlight early cardiovascular risk factors in the youth, aiming to assist in the implementation of more successful prevention strategies. It was meeting the participants in the study, and seeing how some of them were unaware of how their lifestyle choices could influence their health, that motivated her to write the article for this competition.



Winner Young Science Communicators competition, Open category

# About the Author:



Molly Czachur is a marine biologist and loves to ask (and answer) questions about the oceans. She is currently doing her doctoral research at Stellenbosch University, and has worked in Kenya, Germany and the UK. "The oceans are very exciting to me, but there is also still a lot to learn, so I love to share my enthusiasm for science with as many different people as possible, hoping that you will all join in with the fun!" With a competition Molly wanted to answer the question 'what

do you do?' She spends time on South African beaches collecting samples, but spends most of her time inside laboratories. She says "There is never a short answer to 'what do you do?', so I thought that the quickest way to answer this question was with a cartoon." "By sharing the work that we scientists do, I hope that people of all backgrounds can feel included in the work that we are doing, and feel inspired to interact with the oceans themselves." @zoologymoll

## Winner Young Science Communicators competition, Indigenous Language category

#### Ubukrelekrele be ndalo-akulahlwa mbeleko ngakufelwa

**Ukhe weva na nge ntetho ethi "isininzi siyalawula"**. Xa ndingathi thekelela, ingaba loluphi uhlobo lwendalo oluninzi. Ingaba ngabantu, uhlobo oluthile lwezilwanyana okanye izinambuzane. Ndiyacinga ukuba awukhumbulanga ngohlobo lwendalo olungabonakali ngeliso lenyama. Oluhlobo lubizwa ngesingesi ukuba zi-microorganisms. Mhlawumbi ungangazazi ngalendlela, okanye ngeligama. Kodwa uyazi kwantlandlolo ukuba, ubisi xa lubekwe elangeni lujika libengamasi, kwaye ukhe wanambitha i-yoghurt okanye umqombothi, ndingazibala zibeninzi izinto ezikuhlobo lokutya okwenziwa ngumsebenzi wee-microorganisms. Ukhe wacinga ngezinto ezidala ukubolisa ukutya, ikwazizo ii-microorganisms. Ukuba ungakhumbula kulonyaka bekuthe lwale ukugula, de kwasweleka inani elingapha kwekhulu, okukubangelwa yi-listeriosis, sade sancama oo-polony, wena russian ngenxa yelintiyosisi (ngabula thina xabesizamana neligama).

**Oluluhlu olukhankanywe ngentla**, zezo zinento kwenza nokutya, kodwa ke kwa kwezimicroorganism, kukhona ezingunobangela wezifo. Uyazi ukuba kuvamile ebusika ukuxhaphaka kwemikhuhlane, intsholongwane eyandulela ugawulayo kwaye kutsha nje ezindabeni bekwaziswa ngobhubha kwentsana kwisibhedlele sase Mzantsi Afrika zihlaselwe luhlobo lwemicroorganism olubizwa i-klebsiela olungasavi machiza into ebizwa i-antibiotic resistance. Olunye uhlobo lwezi-microorganisms ezinganyangeki ngamachiza akhoyo, ziquka isifo sephepha, i- TB ukutsho, ekuthwa yi-MDR (multidrug resistant)-TB, kunye ne-XDR (extensive drug resistance)-TB. Ezi zinkunzi malanga ezingeva nyango, zaziwa ngokuba azinyangeki ngamachiza akhoyo de lowo othe wahlaselwa, azibone esenziwa ikheswa, lento kuthwa quarantine. Xa ubani athi ahlaselwe ngoluhlobo, ubakwimfazwe engenasiqabu, ubungatsho.

**Ingaba yintoni lento kuthwa yi-antibiotic resistance?** Ezinye izinto kunzima ukuziguqulela ngqo kwintetho yethu-IsiXhosa. Ngoko ke ndizokuzama ngomzekeliso. Imbali ithi, amazwe ngamazwe ebesa kuqubisana, ukuze elo linamandla liphumelele. Ilizwe ke eloyisiweyo ligoduke libe lilahlekelwe ngamajoni amaninzi kwimfazwe leyo. Bekukhe kwenzeke ke ukuba ilizwe eloyiswayo, liyoqeqesha elogcuntswana liseleyo, ngakumbi, lithi lisakuba nobunganga, xa kufika utshaba luzokuhlasela libe lixhobe lafohlela. Limangale elo belisakuphumelela lemfazwe ukuba kuyakanjani abo besibahlasela siboyise, basigunyele emfazweni. Kunjalo ke nokudaleka kwe-antibiotic resistance (khangela ifoto yokuqala). I-antibiotic iqala kakuhle ikwazi ukuyitshabalalisa ithi nya intsholongwane. Ukuze emva kwexesha intsholongwane ibenamadla.

Lamandla entsholongwane, okanye i-antibiotic resistance abangelwa zizinto ezininzi, eziquka, indle ezithi zisetyenziswe ngazo ii-antibiotics, umzekelo ukunyanga umkhuhlane ngeeantibiotics kwakunye neendlela ezisetyenziswa ngazo kwezolimo, nakwizilwanyana (kuquka kwintlanzi). Mvanje, kusuke kwanda ukuxhaphaka kweee ntsholongane ezinganyangekiyo. Lento idala uloyiko nokuthi ubathi angathi aphose kwitawula xa athe wahlaselwa loluhlobo lwentsholongwane.

It is not all lost, atsho amaNgesi. Akulahlwa mbeleko ngakufelwa. Likhona ithemba ngokuba indalo ikrele-krele. Iintsholongwane ezikuhlobo lwee-microorganisms ekuthwa yibacteria zinotshaba lwazo nazo kwalapha koluluhlu lwee-microorganisms. Oluhlobo lubizwa i-bacteriophage. Zithiywe ngokomsebenzi wazo, ukuba "zitya i-bacteria" okanye zihlasela zitshabalalise i-bacteria ngokuthi ziqhekeze ukokhiwa kwazo (khangela ifoto yesibini). Ngenxa yokwanda kwe-antibiotic resistance, oo-somachiza bayazama bakhangela ii-bacteriophages ezingatshabalalisa ezintsholongwane zi-antibiotic resistant. Eliphulo likumazwe ngamazwe. Akuyi kubakudala kakhulu, ii-venkile ezithengisa amayeza zizokuzala imixube ene-phages (khangela ifoto yesithathu). Iphulo ke liphumile ukukhangela ngobuxhaka-xhaka boo-somachiza ezi-bacteriophages ezingaba luncedo ukunyanga ezi-antibiotic resistant genes.

**Gqaba-gqaba nje ngee-bacteriophages**-kwindalo yonke ekhoyo emhlabeni, iibacteriophages zinqenqeza phambili ngamanani. Singathi zilawula ngobuninzi bazo. Zikho kwindawo yonke. Kangangobuninzi bazo, ude athi omnye umbhali zingaqikeleleka kwiinkulungwane eziphinda, phindiweyo. Xa besinothelekiswa nazo ii-bacteriophages thina Bantu, sikha phantsi, siligcuntswana nje elingephi. Nakubeni zingabonwa ngeliso lenyama, ososayenisi bayakwazi ukusebenzisa ubukhakaxhaka (obubonisa kude, i-microscope) ukubona inkangeleko yazo, ukuze kusetyenziswe kwa-ezinye indlela zoo-sosayenisi ukufunda kabanzi ngobomi bazo nendlela ezithi zihlasele ii-bacteria ngazo.

Xa ezi-bacteriophages zilinani elininzi, kwaye zinako ukunyanga izigulo ezidalwa yi-bacteria kubalulekile ukwenza uphando ngazo, sizazi ukuze sizisebenzise kwezempilo zanamhlanje, njengakumazwe aphuhlileyo. Ngoko u-Mzantsi Afrika, nawo, ungathi ungenelele kwiphulo lokukhangela kwindalo kubukrelekrele bendalo ukuze yoyise i-antibiotic resistance. Nakubeni ii-antibiotics zibonakala zisoyisakala, malingapheli ithemba ngoba akulahlwa mbeleko ngakufelwa, ubukrelekrele bendalo buphethe isisombululo.

# About the Author:



Chwayita Ncedana is from a rural town, Ngcobo, in the Eastern Cape. Her background is in Biotechnology and Agricultural Sciences and she spent the last three years at the University of the Western Cape doing research on hot spring bacteriophages and their hosts (bacteria).

The message that Chwayita would like to convey is that the science pot is brewing answers for societal problems, and nature is often the source of these answers.

She introduces the topic of bacteriophages as possible solutions to growing antibiotic resistance. She says, "My wish is for the reader to be introduced to the basics of bacteriophages and their application in phage therapy, and from there continue personal research to be empowered."

### An Art and Science Collaboration: SA Science Lens

NRF-SAASTA and SA Science Lens® invited festivalgoers attending to the National Arts Festival in 2018 to explore art and science in a photographic exhibition of the exquisite and often unseen world of scientific endeavour, from tiny crystal structures to star-shaped nerve cells. Art enthusiasts were asked to delve beyond the usual and be inspired by the beauty of science. The National Arts festival took place from 28 June to 8 July 2018 in Makhanda, Eastern Cape.

Like artists - driven by curiosity, a desire to understand the world around us and a desire to make life better - scientists are creative people, requiring artistry within their explorations. Through their work, they are often also exposed to beauty not seen by those outside their discipline. NRF-NRF-SAASTA's SA Science Lens® competition opens a window into art in science, sharing the beauty with the broader South African public.

Inspiration can be found in textures, shapes, patterns and colours of the scientific world that festival goers may never have seen before, from the sky to the oceans, to the life inside us. The exhibition brought together science and art to form a unique display of visual fascination and splendour.

The exhibition also celebrated 10 rounds of the competition over a span of 15 years, and presented a collection of a range of photos from various science disciplines.

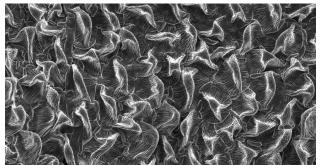
A rose is a rose is a rose, but Dr Lydia-Marie Joubert's photo **"Microscopic Escher"** shows a rose in way not imagined. Made possible by tools science has developed to explore beyond the limits of our own eyes, magnifying this rose petal 600 times reveals its hidden details and even microscopic life residing in its grooves.

Artistic structures exist right beneath our noses, invisible to the naked eye. Andre Botha's **"Small World"** shows a 20 000 time's magnification of silver sulphide crystals that create a striking image of Nano sculptures. Table silverware may be host to a miniature sculpture park.

Fluorescent dyes form an integral part of some fields of research as they assist scientists to observe different aspects of structures and processes. These dyes create colourful displays like those that we see in Dr Edward Nyatia and Dr Dirk Lang's **"Mammalian Astrocyte Cell"**, showing details of a specialised cell of our central nervous system.

It is surprising that brain tissue can look like the artistic doodling of a daydreamer. The image **"The Beautiful Mind"**, also by Lydia-Marie Joubert, creates an unexpected portrayal of our most powerful asset.

The exhibition was well attended by close to 300 people, who spent time to appreciate the uniqueness of the photos and remarked on the wonder of the world and our scientific endeavours.



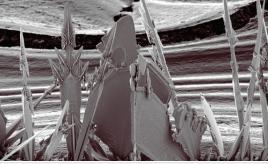


Image: Microscopic Escher, by Lydia-Marie Joubert

Image: Small world, by Andre Botha

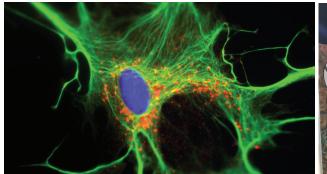


Image: Mammalian astrocyte cell, by Edward Nyatia and Dirk Lang



Image: The Beauty of Science: Part of the SA Science Lens exhibit at the National Arts Festival

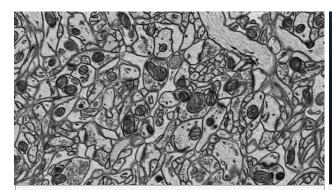


Image: The beautiful mind, by Lydia-Marie Joubert



Image: The Beauty of Science: Part of the SA Science Lens exhibit at the National Arts Festival

# NFR-SAASTA RESULT BOOKLET 2019





Department: Science and Innovation REPUBLIC OF SOUTH AFRICA



# Contents

Acknowledgements	42
Foreword By The Managing Director	44
About The Olympiads And Competitions	43
About The National Research Foundation	43
Olympiad Milestones	43
Criteria For Awarding Certificates	45
Interpreting The Results	45
2019 Awards Categories	46
Intermediate Phase Awards: Natural Sciences Grades	47
Senior Phase Awards: Natural Sciences Grades	48
Fet Phase Awards: Life Sciences Grade	49
Fet Phase Awards: Physical Sciences Grade	50
Physical Sciences Results 2019	55
Life Sciences Results 2019	62
Natural Sciences Grade	82

#### ACKNOWLEDGEMENTS

The South African Agency for Science and Technology Advancement (SAASTA) would like to thank and acknowledge the following organisations for their contributions towards the success of the 2019 National Science Olympiads and Competitions:

#### Main Sponsor:

Harmony Gold Mining Company Limited

Support:

Department of Science and Innovation

Industry Visits, Knowledge Transfer, and Role Models

SA Weather Service

South African National Defence Force (SANDF)

SA Mint

South African National Space Agency (SANSA)

The South African Nuclear Energy Corporation (NECSA)

ASSAF

South African National Energy Development Institute (SANEDI)

National Zoological Gardens (SANBI)

Unisa ISET

Ditsong Musseum

Sci-Bono

Eskom Expo for Young Scientists

The Council for Scientific and Industrial Research (CSIR)

Finally, SAASTA wants to thank the Department of Basic Education, in particular, the MST provincial coordinators, districts, schools, and science educators for encouraging their learners to participate in the National Science Olympiads and Competitions.



Science & innovation Department: Science and Innovation REPUBLIC OF SOUTH AFRICA



## About the Olympiads and competitions

Science Olympiads and Competitions are used internationally as a means of promoting science and excellence in science. SAASTA's Science Olympiads and Competitions not only contributes towards excellence in science, but also has enormous potential in expanding participation levels of previously excluded groups and simultaneously building the capability in the sciences.

SAASTA's Science Olympiads and Competitions started in 1964 with the National Science Olympiad (NSO), initialy for Grade 12 learners with the objective of promoting science. The project continued to be the one of SAASTA's flagship projects. In 2005 then the project started to offering the Grade 10 and 11 an exiting opotunity to compete and interect in the science arena with fellow learners from all the nine provinces in South Africa, and in the Southern African Development Countries (SADC) such as Lesotho, Namibia and Zimbabwe.

SAASTA is currently running Olympiads and competitions for primary schools learners as well as secondary schools learners. The Natural Science Olympiad for Grade 4 to 6 was introduced in 2011 and the following year the Olympiad was expanded to include Grades 7 to 9.The competitions that SAASTA run include the Astro Quiz for grade 7 learners and the Science Debates for grade 11 learners.

The Olympiads are an annual written examination comprising of questions set by field experts in Physical Sciences, Life Sciences and the Natural Sciences. The top performing learners and schools are then awarded based on their excellence. The Astro Quiz and Science Debates are run in teams starting at a school level followed by districts and provincial level. The best nine teams for each competition representing the nine provinces are selected and compete nationally to find the national winning teams.

The main focus of the Olympiads and competitions is to encourage excellence in science education and to stimulate interest in the sciences. It further seeks to inspire young people to further their studies in Science, Engineering and Technology (SET). To ensure that talent in SET is identified and nurtured, a group of learners who excelled or demonstrated potential during the Olympiad examination, are traditionally invited to participate in an Award Giving Ceremony during the course of the year. Upon arrival, the learners are treated to a Science Focus Week full of educational excursions, stimulating lectures and other fun events.

### About the National Research Foundation

The National Research Foundation was established through the National Research Foundation Act (Act No 23 of 1998). The objective of the National Research Foundation (NRF) is to support and promote research through funding, human capacity development, and the provision of the necessary research facilities, to facilitate the creation of knowledge, innovation, and development in all fields of the natural and social sciences, humanities, and technology, including indigenous knowledge systems.

To enable the NRF to deliver on its mandate, the organisation has three main functions:

• To support research and innovation through its agency, Research and Innovation Support and Advancement (RISA);

• To encourage an interest in science and technology through its business unit, the South African Agency for Science and Technology Advancement (SAASTA); and

• To facilitate high-end research through its National Research Facilities.



#### **Olympiad Milestones**

Over the years, a number of milestones were achieved through the Olympiads and Competitions, in particular:

• A major three-year sponsorship was secured from Harmony Gold Mining Company in 2009 which has since been renewed on an annual basis.

• Through the Association of Science, Technology, Engineerring, Mathematics and Innovation (ASTEMI), the Department of Science and Innovation provides SAASTA with funding to increase the participation of Mathematics, Science, Technology and Innovation.

#### Foreword by the Managing Director

The NRF-SAASTA Science Olympiads and Competitions – National Science Olympiad, Natural Science Olympiad, AstroQuiz and Science Debates – is enjoying an unprecedented period of growth and diversity.

Approximately 135 252 learners took part in the 2019 Science Olympiads and Competitions – from this total a record number of 76 988 learners participated in the Natural Science Olympiad examination – this highlights the outstanding increase in learner numbers at all levels over the past years.

The awards for the 2019 Science Olympiads and Competitions reflects the NRF-SAASTA's increasing national and international profile on enhanced scientific literacy and reaffirms our mandate of changing people's lives by fostering better and more valuable science engagement, primarily learners in the deprived provinces of our country.

The nurturing of the next generation of South African science front-runners remains a priority at the NRF-SAASTA, this is underpinned by a number of educator and learner development programmes in both primary and high schools. Through our Science Olympiads and Competitions we are able to encourage excellence in science and technology, thus stimulating interest in the sciences and creating opportunities for our new generation. We further seek to inspire young people to further their studies in Science, Engineering and Technology. To date, we can confirm that the majority of our past participants advance their post school studies in the STEMI field and thus contributes to the human capacity in these critical .M any of our participating primary school learners continue to select Mathematics and Science as a subject in High School. These achievements and contribution to the critical sets will have a positive economic impact on our country and Southern Africa.

We've had numerous other highlights, some recorded in this publication. There has been an upsurge in the quality of our examination papers over the years and our awards ceremony is enjoying world-class status. The major three-year sponsorship secured from Harmony Gold Mining Company in 2009 has since been renewed on an annual basis. The Department of Science and Innovation which is our line department also provides NRF-SAASTA with funding to increase the participation and performance of learners in our Science Olympiads and Competitions. The most visible manifestation of NRF-SAASTA's commitment to science engagement and specifically popularizing science, engineering, technology and innovation is seen in our collaboration with international science partners at various platforms that enables us to expose our top performing learners to first-rate science platforms and initiatives around the world, subsequently promoting careers in science.

This booklet attempts to provide a snapshot of all our Science Olympiads and Competitions results and activities of 2019, but it is impossible to cover all aspects of the Science Olympiads and Competitions journey. We have carefully chosen content that represent the diversity and success of the journey with only top performing learners, schools and those who achieved above 60% being profiled.

We hope you will enjoy reading our result booklet and sharing our Science Olympiads and Competitions journey with us.

Managing Director of SAASTA Dr Jabulani Nukeri

#### Criteria for awarding certificates

Learners who obtained at least 50% in the Olympiad will each receive an achievement or participation certificate.

#### Interpreting the results

Only learners that scored above 60% in the Natural Sciences and 50% in the Physical Sciences and Life Sciences during the Olympiad are published in this result booklet.

If a block appears devoid of information on the results list, it would be that the information was not completed appropriately on the answer sheet.

Schools that are interested in their results, can obtain the individual learner scores and school average by contacting the Science Olympiad Team on scienceolympiad@saasta.ac.za

Awards for the top provincial winners are awarded a day before the national awards. National winners for Astro Quiz and Science Debates are only known and announced on the day of the awards and hence not included in the result booklet.

#### 2019 Awards Categories

In 2019, awards were given to deserving schools and learners in different categories. The main categories are as follows:

Olympiad	Category
Senior Phase Awards: Astro Quiz Grade 7	National top 3 Astro Quiz teams
FET Phase Awards: Science Debates Grade 11	National top 3 Science Debates teams
	National top 3 learners
Intermediate Phase Awards: Natural Sciences	Top girl Learner
Grades 4-6	Top Grade 5 learner
	Top Grade 4 learner
	Top provincial winners
	National top 3 learners
	Top girl learner
Senior Phase Awards: Natural Sciences Grades 7-9	Top Grade 8 learner
	Top Grade 7 learner
	Top provincial winners
	National top 3 learners
	Top girl learner
FET Phase Awards: Life Sciences Grade 10-11	Top Grade 11 learner
	Top Grade 10 learner
	Top provincial winners
	Top SADC learner
	National top 3 learners
	Top girl learner
FET Phase Awards: Physical Sciences Grade 10-11	Top Grade 11 learner
rer mase Awaras. mysical sciences Grade 10-11	Top Grade 10 learner
	Top provincial winners
	Top SADC learner
Highest Participation in sponsorship of Harmony	Top 3 schools
Highest Participation – Province	Top province



#### Intermediate Phase Awards: Natural Sciences Grades 4-6

	_		TOP NATIO	ONAL ACHIEVERS FOR GR	ADES 4 TO 6		
#	LEAR	NER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	SJ	Jama	М	H2 Primary	Eastern Cape	6	83
2	IF	Kondile	F	Mbekweni Primary	Western Cape	6	82
		T	OP LEARNE	RS PER GRADE (GRADES	4 AND 5 ONLY)		
#	LEARN	IER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	MP	Debele	F	Nelson Ngubeni Primary	Mpumalanga	4	78
1	WM	Muridili	F	Bashasha Primary	Limpopo	5	82
			TOP	GIRL LEARNER (GRADES	4 TO 6)		
#	LEARN	IER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	IF	Kondile	F	Mbekweni Primary	Western Cape	6	82
			TOP PRO	VINCIAL LEARNERS (GRA	DES 4 TO 6)		
#	LEARN	IER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
<b>#</b> 1	<b>LEARN</b> CB	IER Reyburn	<b>GENDER</b> M	SCHOOL NAME Hatfield Christian	<b>PROVINCE</b> Gauteng	<b>GRADE</b> 5	<b>%</b> 76
# 1 2							
1	СВ	Reyburn	Μ	Hatfield Christian	Gauteng	5	76
1 2	CB LZ	Reyburn Kunene	M F M	Hatfield Christian Schulzendal Primary	Gauteng Mpumalanga	5	76 78
1 2 3	CB LZ R	Reyburn Kunene Collett	M F M	Hatfield Christian Schulzendal Primary North Primary	Gauteng Mpumalanga Free State	5 6 6	76 78 66
1 2 3 4	CB LZ R NR	Reyburn Kunene Collett Fhedzisani	M F M M	Hatfield Christian Schulzendal Primary North Primary Bashasha Primary	Gauteng Mpumalanga Free State Limpopo	5 6 6 6	76 78 66 82
1 2 3 4 5	CB LZ R NR S	Reyburn Kunene Collett Fhedzisani Eyob	M F M M F	Hatfield Christian Schulzendal Primary North Primary Bashasha Primary Roshunville Primary	Gauteng Mpumalanga Free State Limpopo North West	5 6 6 6 6	76 78 66 82 62
1 2 3 4 5 6	CB LZ R NR S W	Reyburn Kunene Collett Fhedzisani Eyob Mayisa	M F M F F	Hatfield Christian Schulzendal Primary North Primary Bashasha Primary Roshunville Primary Ncotshane Pimay	Gauteng Mpumalanga Free State Limpopo North West KwaZulu-Natal	5 6 6 6 6 6	76 78 66 82 62 80

# P

	Se	enior Phase Aw	ards: Natu	ıral Sciences Grades 7-9			
			TOP /	ACHIEVERS FOR GRADES 7 TO	8		
#	LEAF	RNER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	SM	Mtsweni	М	Zacheus Malaza Secondary	Mpumalanga	9	84
2	А	Kaur	F	Model Private	Eastern Cape	9	83
3	TW	Nkwanyana	М	Zacheus Malaza Secondary	Mpumalanga	9	83
		TC	OP LEARNEI	RS PER GRADE (GRADES 7 ANI	0 8 ONLY)		
#	LEAR	NER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	AB	Siziba	F	Model Private	Eastern Cape	7	77
1	А	Bester	Μ	Pretoria Boys High	Gauteng	8	80
			TOPG	GIRL LEARNER (GRADES 7 AND	9)		
#	LEAR	NER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	А	Kaur	F	Model Private	Eastern Cape	9	83
1	A	Kaur	•	Model Private INCIAL LEARNERS (GRADES 7 .		9	83
1 #	A LEARN		TOP PROV			9 GRADE	83 %
			TOP PROV	INCIAL LEARNERS (GRADES 7	AND 9)		
	LEARN	IER	TOP PROV GENDER	INCIAL LEARNERS (GRADES 7	AND 9) PROVINCE	GRADE	%
	<b>LEARN</b> A	<b>IER</b> Bester	TOP PROV GENDER M	INCIAL LEARNERS (GRADES 7 . SCHOOL NAME Pretoria Boys High	AND 9) PROVINCE Gauteng	<b>GRADE</b> 8	<b>%</b> 80
	LEARN A SM	<b>JER</b> Bester Mtsweni	TOP PROV GENDER M M	INCIAL LEARNERS (GRADES 7 SCHOOL NAME Pretoria Boys High Zacheus Malaza Secondary	AND 9) PROVINCE Gauteng Mpumalanga	<b>GRADE</b> 8 9	% 80 84
	LEARN A SM RM	<b>IER</b> Bester Mtsweni Mokatile	TOP PROV GENDER M M F	INCIAL LEARNERS (GRADES 7 SCHOOL NAME Pretoria Boys High Zacheus Malaza Secondary Mohaladitwe High	AND 9) PROVINCE Gauteng Mpumalanga Free State	<b>GRADE</b> 8 9 8	% 80 84 50
# 1 1 1	LEARN A SM RM P	<b>IER</b> Bester Mtsweni Mokatile Nape	TOP PROV GENDER M M F F	INCIAL LEARNERS (GRADES 7 SCHOOL NAME Pretoria Boys High Zacheus Malaza Secondary Mohaladitwe High Leap Science and Maths	AND 9) PROVINCE Gauteng Mpumalanga Free State Limpopo	<b>GRADE</b> 8 9 8 8 9	% 80 84 50 73
# 1 1 1	LEARM A SM RM P PM	<b>JER</b> Bester Mtsweni Mokatile Nape Makhubela	TOP PROV GENDER M M F F F M	INCIAL LEARNERS (GRADES 7 SCHOOL NAME Pretoria Boys High Zacheus Malaza Secondary Mohaladitwe High Leap Science and Maths Sunriseview Secondary	AND 9) PROVINCE Gauteng Mpumalanga Free State Limpopo North West	<b>GRADE</b> 8 9 8 9 9 9 9	% 80 84 50 73 62
# 1 1 1 1 1 1	LEARN A SM RM P PM RN	NER Bester Mtsweni Mokatile Nape Makhubela Naidoo	TOP PROV GENDER M M F F M M	INCIAL LEARNERS (GRADES 7 SCHOOL NAME Pretoria Boys High Zacheus Malaza Secondary Mohaladitwe High Leap Science and Maths Sunriseview Secondary Star College High Durban	AND 9) PROVINCE Gauteng Mpumalanga Free State Limpopo North West KwaZulu-Natal	<b>GRADE</b> 8 9 8 9 9 9 9 9	% 80 84 50 73 62 81



#### FET Phase Awards: Life Sciences Grade 10-11

_	TOP ACHIEVERS FOR GRADES 10-12						
#	# LEARNER GE		GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	MC	Ramulongo	M	Livha Combined School		12	88
2	LM	Lubowa	М	African Leadership Academy	Gauteng	11	82
3	Р	Gadri	М	African Leadership Academy	Gauteng	12	81
			TOP ACH	IEVERS FOR GRADES 10-12 SAD	C		
	LEAR	NER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
	KG	Mapika	F	Gateway High	Zimbabwe	12	90
		TOF	LEARNERS	PER GRADE (GRADES 10 AND 1	I ONLY)		
#	LEARN	IER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1 1	AM LM	Snyman Lubowa	F M	El Shaddai Christian School African Leadership Academy	Western Cape Gauteng	10 11	60 82
			TOP G	IRL LEARNER (GRADES 10 - 12)			
#	LEARN	IER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	N	Fakude	F	St Matthews Secondary	Gauteng	12	- /
	TOP PROVINCIAL LEARNERS (GRADES 10 - 12)						76
					9		/6
#	LEARN				9	GRADE	%
#	<b>LEARN</b> LM		TOP PROV	NCIAL LEARNERS (GRADES 10 -	12)		
#		IER	TOP PROVI	NCIAL LEARNERS (GRADES 10 - SCHOOL NAME	12) PROVINCE	GRADE	%
#	LM	I <b>ER</b> Lubowa	TOP PROVI GENDER M	NCIAL LEARNERS (GRADES 10 - SCHOOL NAME African Leadership Academy	12) PROVINCE Gauteng	<b>GRADE</b>	<mark>%</mark> 82
#	LM Am	IER Lubowa Malete	TOP PROVI GENDER M F	NCIAL LEARNERS (GRADES 10 - SCHOOL NAME African Leadership Academy Khamane Secondary	12) PROVINCE Gauteng Mpumalanga	<b>GRADE</b> 11 12	% 82 58
#	LM Am Mm	IER Lubowa Malete Montsi	TOP PROVI GENDER M F F	NCIAL LEARNERS (GRADES 10 - SCHOOL NAME African Leadership Academy Khamane Secondary Sekgutlong High	12) PROVINCE Gauteng Mpumalanga Free State	<b>GRADE</b> 11 12 12	% 82 58 75
#	LM Am Mm MC	IER Lubowa Malete Montsi Ramulongo	TOP PROVI GENDER M F F M	NCIAL LEARNERS (GRADES 10 - SCHOOL NAME African Leadership Academy Khamane Secondary Sekgutlong High Livha Combined School	12) PROVINCE Gauteng Mpumalanga Free State Limpopo	<b>GRADE</b> 11 12 12 12 12 12	% 82 58 75 88
#	LM Am Mm MC K	ER Lubowa Malete Montsi Ramulongo Steyn	TOP PROV GENDER M F M F M F M	NCIAL LEARNERS (GRADES 10 - SCHOOL NAME African Leadership Academy Khamane Secondary Sekgutlong High Livha Combined School Potchefstroom Gimnasium	12) PROVINCE Gauteng Mpumalanga Free State Limpopo North West	<b>GRADE</b> 11 12 12 12 12 12	% 82 58 75 88 64



#### FET Phase Awards: Physical Sciences Grade 10-11

			S 10 AND 12)				
#	LEAF	RNER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	NN Philip		М	Mbilwi Secondary	Limpopo	12	82
2	Y	Ebrahim	М	Star College Bridgetown	Western Cape	11	76
3	AJ	Naidu	М	Eden College Durban	KwaZulu-Natal	12	74
				CHIEVERS FOR GRADES 10-			
	LEAF	RNER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
_	IA	Mlauzi	F	Arundel	Zimbabwe	11	75
		Т	OP LEARNI	ERS PER GRADE (GRADES 10			
#	LEAR	NER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1	CR	Ramonetha	F	Rasema Secondary	Limpopo	10	52
1	Y	EBRAHIM	М	Star College Bridgetown	Western Cape	11	76
			TO	P GIRL LEARNER (GRADES 10	D -12)		
#	LEAR	NER	GENDER	SCHOOL NAME	PROVINCE	GRADE	%
1				African Leadership			
1	F	Desta	F	Academy	Gauteng	12	69
•	F	Desta	-	Academy OVINCIAL LEARNERS (GRAD	Gauteng ES 10 - 12)	12	69
#	F LEAR		-	,		12 GRADE	69 %
	LEAR	NER	TOP PRO	OVINCIAL LEARNERS (GRAD SCHOOL NAME African Leadership	ES 10 - 12)	GRADE	%
	<b>LEAR</b> F	NER Desta	TOP PRO GENDER	OVINCIAL LEARNERS (GRAD SCHOOL NAME African Leadership Academy	ES 10 - 12) PROVINCE	<b>GRADE</b> 12	% 69
	LEAR	NER	TOP PRO	OVINCIAL LEARNERS (GRAD SCHOOL NAME African Leadership	ES 10 - 12) PROVINCE Gauteng	GRADE	%
	<b>LEAR</b> F	<b>NER</b> Desta Khumalo	TOP PRO GENDER	OVINCIAL LEARNERS (GRAD SCHOOL NAME African Leadership Academy Masitakhe Secondary	ES 10 - 12) PROVINCE Gauteng Mpumalanga	<b>GRADE</b> 12	% 69
	LEAR F N	NER Desta	TOP PRO GENDER F M	OVINCIAL LEARNERS (GRAD SCHOOL NAME African Leadership Academy	ES 10 - 12) PROVINCE Gauteng Mpumalanga Free State	<b>GRADE</b> 12 12	% 69 61
	LEAR F N NN	NER Desta Khumalo Philip	TOP PRO GENDER F M M	OVINCIAL LEARNERS (GRAD SCHOOL NAME African Leadership Academy Masitakhe Secondary Mbilwi Secondary Mmankala Tech and Com	ES 10 - 12) PROVINCE Gauteng Mpumalanga Free State Limpopo	<b>GRADE</b> 12 12 12	% 69 61 82
	LEAR F N NN GT	NER Desta Khumalo Philip Sekati	TOP PRO GENDER F M M M	OVINCIAL LEARNERS (GRAD SCHOOL NAME African Leadership Academy Masitakhe Secondary Mbilwi Secondary Mmankala Tech and Com High	ES 10 - 12) PROVINCE Gauteng Mpumalanga Free State Limpopo North West	GRADE 12 12 12 12 12 12 12 12 12 12 12 12 12	% 69 61 82 51
	LEAR F N NN GT AJ	NER Desta Khumalo Philip Sekati Naidu	TOP PRO GENDER F M M M M	OVINCIAL LEARNERS (GRAD SCHOOL NAME African Leadership Academy Masitakhe Secondary Mbilwi Secondary Mmankala Tech and Com High Eden College Durban	ES 10 - 12) PROVINCE Gauteng Mpumalanga Free State Limpopo North West KwaZulu-Natal	GRADE 12 12 12 12 12 12 12 12 12 12 12 12 12	% 69 61 82 51 74



### Schools and Provinces Awards

HIGHEST PARTICIPATION IN SPONSORSHIP OF HARMONY								
School Name	Province	Number of Entries						
1. Mbilwi Secondary School	Limpopo	1238	8					
2. Risinga High School	Limpopo	1180	0					
3. Thengwe High School	Limpopo	988	8					
ł	HIGHEST PARTICIPATIO	DN -PROVINCE						
Province		Number of Entries						
Limpopo	IMPORTANT	NOTE 2444	18					

Learner Category: If learners within a specific category scored below 60%, they were not considered for an award.

Provincial Category: If all learners scored below 60%, it was not considered for an award. Incase of a tie, tiebreaker questions were used to differentiate learners

NATIONAL FINALS: SCIENCE DEBATE LEARNERS PER PROVINCE								
			Gau	teng				
Initials	Surname	Gender	Grade	School Name	Province			
С	Moses	F	9	Randfontein High	Gauteng			
U	Solomon	М	10	Randfontein High	Gauteng			
E.	Dumezweni	F	11	Randfontein High	Gauteng			
J	Daniels	F	10	Randfontein High	Gauteng			
S	Mabelane	М	10	Randfontein High	Gauteng			
			Mpum	alanga				
Initials	Surname	Gender	Grade	School Name	Province			
NN	Manzini	F	10	Mashishing Secondary	Mpumalanga			
PS	Magagula	F	10	Mashishing Secondary	Mpumalanga			
ТК	Mamiane	М	9	Mashishing Secondary	Mpumalanga			
NJ	Moraba	М	9	Mashishing Secondary	Mpumalanga			
MP	Mathunjwa	F	9	Mashishing Secondary School	Mpumalanga			
			Free	State				
Initials	Surname	Gender	Grade	School Name	Province			
J	Chuang	F	11	St Michael's Girls High	FS			
V	Eliades	F	11	St Michael's Girls High	FS			
PS	Radikeledi	F	10	St Michael's Girls High	FS			
А	Bell	F	9	St Michael's Girls High	FS			
KR	Mabalane	F	10	St Michael's Girls High	FS			
			Limp	ооро				
Initials	Surname	Gender	Grade	School Name	Province			

Ρ	Mphahlele	F	11	SJ Van Der Merwe High	Limpopo
К.	Kekana	F	11	SJ Van Der Merwe High	Limpopo
L	Chuene	F	10	SJ Van Der Merwe High	Limpopo
В	Maleka	F	10	SJ Van Der Merwe High	Limpopo
К	Maja	F	10	SJ Van Der Merwe High	Limpopo
			North V	Vest	
Initials	Surname	Gender	Grade	School Name	Province
К.	Ayiam	F	9	Hartbeespoort High	NW
О.	Dlamini	F	10	Hartbeespoort High	NW
E.	Vhurumuku	F	10	Hartbeespoort High	NW
К.	Mdawe	F	10	Hartbeespoort High	NW
T.	Maleka	М	10	Hartbeespoort High	NW
			KwaZulu-	Natal	
Initials	Surname	Gender	Grade	School Name	Province
S.J	Cele	М	11	Port Shepstone High	KZN
M.E	Kamuhanda	F	10	Port Shepstone High	KZN
A.S	Bhawaniepersad	F	10	Port Shepstone High	KZN
ZH	Ndlovu	F	10	Port Shepstone High	KZN
NS	Mthembu	F	11	Port Shepstone High	KZN
			Eastern	Саре	
Initials	Surname	Gender	Eastern Grade	Cape School Name	Province
<b>Initials</b> M	<b>Surname</b> Palele	<b>Gender</b> F		•	<b>Province</b> EC
			Grade	School Name	
М	Palele	F	<b>Grade</b> 11	School Name West Bank High	EC
M M	Palele Ndevu	F F	<b>Grade</b> 11 10	School Name West Bank High West Bank High	EC EC
M M B	Palele Ndevu Gxotani	F F F	<b>Grade</b> 11 10 10	School Name West Bank High West Bank High West Bank High	EC EC EC
M M B O B	Palele Ndevu Gxotani Ngolotyi	F F M	<b>Grade</b> 11 10 10 10	School Name West Bank High West Bank High West Bank High West Bank High	EC EC EC EC
M M B O B	Palele Ndevu Gxotani Ngolotyi	F F M	<b>Grade</b> 11 10 10 10 11	School Name West Bank High West Bank High West Bank High West Bank High	EC EC EC EC
M M B O B U	Palele Ndevu Gxotani Ngolotyi Mahobe	F F M M	Grade         11         10         10         10         10         10         Western	School Name West Bank High West Bank High West Bank High West Bank High West Bank High	EC EC EC EC
M M B O B U Initials	Palele Ndevu Gxotani Ngolotyi Mahobe	F F M M Gender	Grade         11         10         10         10         10         Western         Grade	School Name West Bank High West Bank High West Bank High West Bank High West Bank High Cape School Name	EC EC EC EC Province
M M B O B U U Initials	Palele Ndevu Gxotani Ngolotyi Mahobe Surname Nogaga	F F M M <b>Gender</b> F	Grade         11         10         10         10         10         Western         Grade         10	School Name West Bank High West Bank High West Bank High West Bank High West Bank High West Bank High Holy Cross High	EC EC EC EC Province
M M B O B U U Initials O. Z.	Palele Ndevu Gxotani Ngolotyi Mahobe Surname Nogaga Mack	F F M M <b>6ender</b> F F	<ul> <li>Grade</li> <li>11</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>11</li> <li>Grade</li> <li>10</li> <li>11</li> </ul>	School Name West Bank High West Bank High West Bank High West Bank High West Bank High West Bank High Holy Cross High Holy Cross High	EC EC EC EC <b>Province</b> WC WC
M M B O B U <b>Initials</b> O. Z. R	Palele Ndevu Gxotani Ngolotyi Mahobe Surname Nogaga Mack Mugwara	F F M M <b>Gender</b> F F	<ul> <li>Grade</li> <li>11</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>11</li> <li>Western</li> <li>Grade</li> <li>10</li> <li>11</li> <li>9</li> </ul>	School Name West Bank High West Bank High West Bank High West Bank High West Bank High West Bank High Holy Cross High Holy Cross High	EC EC EC EC WC WC WC
M M B O B U <b>Initials</b> O. Z. R P	Palele Ndevu Gxotani Ngolotyi Mahobe <b>Surname</b> Nogaga Mack Mugwara Phuza	F	<ul> <li>Grade</li> <li>11</li> <li>10</li> <li>10</li> <li>10</li> <li>11</li> <li>Western</li> <li>Grade</li> <li>10</li> <li>11</li> <li>9</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>11</li> <li>10</li> <li>11</li> <li< td=""><td>School Name West Bank High West Bank High W</td><td>EC EC EC EC WC WC WC WC</td></li<></ul>	School Name West Bank High West Bank High W	EC EC EC EC WC WC WC WC
M M B O B U <b>Initials</b> O. Z. R P	Palele Ndevu Gxotani Ngolotyi Mahobe <b>Surname</b> Nogaga Mack Mugwara Phuza	F	Grade       11       10       10       10       10       10       11       Grade       10       10       11       9       10       11	School Name West Bank High West Bank High W	EC EC EC EC WC WC WC WC
M M B O B U <b>Initials</b> O. Z. R P J	Palele Ndevu Gxotani Ngolotyi Mahobe <b>Surname</b> Nogaga Mack Mugwara Phuza Kanda	F	<ul> <li>Grade</li> <li>11</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>10</li> <li>11</li> <li>9</li> <li>10</li> <li>11</li> <li>9</li> <li>10</li> <li>11</li> <li>Northern</li> </ul>	School Name West Bank High West Bank High W	EC EC EC EC WC WC WC WC WC WC
M M M B O B O B O C C C C C C C C C C C C C C	Palele Ndevu Gxotani Ngolotyi Mahobe Surname Nogaga Mack Mugwara Phuza Phuza Kanda	F	Grade         11         10         10         10         10         10         10         10         11         00         11         00         11         00         11         01         10         11         9         10         10         11         9         10         11         Northern         Grade	School Name West Bank High West Bank High Holy Cross High	EC EC EC EC WC WC WC WC WC WC
M M B O B U <b>Initials</b> O. Z. R P J J <b>Initials</b>	Palele Ndevu Gxotani Ngolotyi Mahobe Surname Mack Mugwara Phuza Kanda Surname Thomas	F	Grade         11         10         10         10         11         Western         Grade         10         10         11         9         10         11         9         10         11         9         10         11         9         10         11         9         10         11         9         10         11         9         10         11         9         10         11         9         10         11         12         Northern         Grade         11	School Name West Bank High West Bank High Holy Cross High Holy Cross High Holy Cross High Holy Chol Holy Chol Holy Chol Holy Chol Holy Chol Holy Chol Holy Chol H	EC         EC         EC         EC         EC         WC         WC

Н	Lawani	F	11	Kimberley	Girls High	NC
	NATION	IAL FINALIS	- ASTRO QUIZ	LEARNER		E
			GAUTEN			
LEARNER		GENDER	SCHOOL NAM		PROVINCE	GRADE
A	Rushworth	F	Weltevreden F Primary	Park	Gauteng	7
J	Desai	М	Weltevreden F Primary	Park	Gauteng	7
A	Degger	F	Weltevreden F Primary		Gauteng	7
K	Van Dijk	F	Weltevreden F Primary	Park	Gauteng	7
			MPUMALAI			
LEARNER		GENDER	SCHOOL NAM		PROVINCE	GRADE
FN	Nkosi	F	Vulemehlo Pr		Mpumalanga	7
ΡL	Mavuso	F	Vulemehlo Pr	/	Mpumalanga	7
OP	Sambo	M	Vulemehlo Pr	,	Mpumalanga	7
LΡ	Mabuza	М	Vulemehlo Pr	imary	Mpumalanga	7
			FREE STA	TF		
LEARNER		GENDER	SCHOOL NAM		PROVINCE	GRADE
Т	Radebe	М	Witsieshoek Pr	rimary	Free state	7
Ν	Sethunya	F	Witsieshoek Pr	rimary	Free state	7
R	Mphirime	F	Witsieshoek Pr	rimary	Free state	7
BB	Mofokeng	F	Witsieshoek Pr	rimary	Free state	7
			LIMPOP			
LEARNER		GENDER	SCHOOL NAM		PROVINCE	GRADE
К	PHALA	F	Mohloping Pri	-	Limpopo	7
Т	THOBEJANE	F	Mohloping Pri		Limpopo	7
Т	SEKGOBELA	F	Mohloping Pri		Limpopo	7
E	Mohlala	F	Mohloping Pri	mary	Limpopo	7
L			NORTH W	EST		
LEARNER		GENDER	SCHOOL NAM	ЛЕ	PROVINCE	GRADE
С	Hattingh	F	Baillie Park Pri	imary	North West	7
1	Redeliwghuys	F	Baillie Park Pri		North West	7
Z	Krause	F	Baillie Park Pri	imary	North West	7
А	Zitzke	F	Baillie Park Pri	imary	North West	7
			KWAZULU-N			
LEARNER		GENDER	SCHOOL NAM		PROVINCE	GRADE
S	Khanyile	М	Ncotshane Se Primary		KwaZulu-Natal	7
SK	Kumalo	М	Ncotshane Se Primary		KwaZulu-Natal	7
A	Mncibi	F	Ncotshane Se Primary		KwaZulu-Natal	7
К	Shabangu	F	Ncotshane Se Primary		KwaZulu-Natal	7
			EASTERN C	APE		

LEARNER		GENDER	SCHOOL NAME	PROVINCE	GRADE
LD	Mgedezi	F	Model Private	Eastern Cape	7
Р	Rhawuzela	F	Model Private	Eastern Cape	7
AB	Sibiza	F	Model Private	Eastern Cape	7
NT	Dlamini	F	Model Private	Eastern Cape	7
			WESTERN CAPE		
LEARNER		GENDER	SCHOOL NAME	PROVINCE	GRADE
М	Leonard	F	Park Laerskool	Western Cape	7
С	Du Plessis	F	Park Laerskool	Western Cape	7
JP	Le Roux	М	Park Laerskool	Western Cape	7
JO	Meyer	М	Park Laerskool	Western Cape	7
			NORTHERN CAPE		
LEARNER		GENDER	SCHOOL NAME	PROVINCE	GRADE
Н	Maass	М	Springbok Primary	Northern Cape	7
Т	Brandt	F	Springbok Primary	Northern Cape	7
KA	Burger	F	Springbok Primary	Northern Cape	7
LR	Thiart	F	Springbok Primary	Northern Cape	7



### Physical Sciences Results 2019

Initials	Surname	Gender	Grade	School Name	Province	Total
NN	Philip	М	12	Mbilwi Secondary	Limpopo	82
Y	Ebrahim	М	11	Star College Bridgetown	Western Cape	76
IA	Mlauzi	F	11	Arundel	Zimbabwe	75
AJ	Naidu	М	12	Eden College Durban	KwaZulu-Natal	74
ZV	Vermeulen	М	11	Helderberg High	Western Cape	72
TS	Machapa	М	12	Makomborero Zimbabwe	Zimbabwe	72
PL	Goshomi	М	12	Makomborero Zimbabwe	Zimbabwe	72
MS	Suleiman	М	12	Star College Bridgetown	Western Cape	71
Р	Mudimu	М	12	Makomborero Zimbabwe	Zimbabwe	70
GL	Louw	М	12	Grantleigh	KwaZulu-Natal	70
TG	Warner	М	12	Bishops	Western Cape	70
F	Desta	F	12	African Leadership Academy	Gauteng	69
V	Janse Van Rensburg	М	12	Alma Mater International	Gauteng	68
RG	Ghosh	М	12	British International College	Gauteng	67
FR	Hill	М	12	El Shaddai Christian School Christian College	Gauteng	67
HB	Cohn	М	12	Herzlia High	Western Cape	66
AM	Mabhena	М	12	Makomborero Zimbabwe	Zimbabwe	66
SL	Ndlovu	М	12	Makomborero Zimbabwe	Zimbabwe	65
LT	Nyarambi	М	12	Makomborero Zimbabwe	Zimbabwe	63
Т	Mashabela	М	12	Rantobeng Secondary	Limpopo	63
Р	Stead	М	12	El Shaddai Christian School Christian College	Gauteng	63
E	Marais	М	12	Greenside High	Gauteng	62
MM	Mano	F	12	Arundel	Zimbabwe	62
LM	Chimutumbira	М	12	Watershed College	Zimbabwe	62
SC	Carstens	М	12	Hoerskool Durbanville	Western Cape	61
MT	Mowzer	М	12	Fairbairn College	Western Cape	61
Ν	Khumalo	М	12	Masitakhe Secondary	Mpumalanga	61
TJ	Machuwe	F	12	Watershed College	Zimbabwe	61
MB	Boeddinghaus	М	12	Bishops	Western Cape	61
Т	Van Camp	М	12	Outeniqua High	Western Cape	61
Т	Lehlokoa	F	12	Rantobeng Secondary	Limpopo	60
DM	Hlabjago	F	10	Zacheus Malaza Secondary	Mpumalanga	60
KK	Matenchi	F	10	Zacheus Malaza Secondary	Mpumalanga	60
TL	Mahlangu	М	11	Zacheus Malaza Secondary	Mpumalanga	60

KT	Phillias	F	11	Zacheus Malaza Secondary	Mpumalanga	60
ES	Sibiya	М	11	Zacheus Malaza Secondary	Mpumalanga	60
MA	Nkosi	М	10	Zacheus Malaza Secondary	Mpumalanga	60
MT	Mokgoatjane	F	10	Zacheus Malaza Secondary	Mpumalanga	60
NN	Ndachena	F	11	Arundel	Zimbabwe	60
ТВ	Makokove	М	12	Watershed College	Zimbabwe	60
L	Mulaisi	М	12	Thengwe High	Limpopo	59
S	Mhlanga	М	10	Zacheus Malaza Secondary	Mpumalanga	59
VM	Inguane	F	11	Zacheus Malaza Secondary	Mpumalanga	59
S	Dlomo	Male	12	Greytown Secondary	KwaZulu-Natal	59
RD	Tshinavhe	М	12	Thengwe High	Limpopo	58
BT	Tlou	М	10	Zacheus Malaza Secondary	Mpumalanga	58
SD	Paneng	F	10	Zacheus Malaza Secondary	Mpumalanga	58
D	Mvumazela	F	10	Zacheus Malaza Secondary	Mpumalanga	58
BB	Billion	М	11	African Leadership Academy	Gauteng	57
KT	Mhlongo	М	12	Moreko High	Limpopo	57
В	Molele	М	12	Tembisa Secondary	Gauteng	57
S	Muhilane	М	12	Mabande Comprehensive	Mpumalanga	57
MJ	Mashabela	F	10	Zacheus Malaza Secondary	Mpumalanga	57
ТМ	Mohlala	F	10	Zacheus Malaza Secondary	Mpumalanga	57
DR	Mponde	М	10	Zacheus Malaza Secondary	Mpumalanga	57
NB	Mabila	F	11	Zacheus Malaza Secondary	Mpumalanga	57
Т	Masango	М	11	Zacheus Malaza Secondary	Mpumalanga	57
LT	Sukazi	F	11	Zacheus Malaza Secondary	Mpumalanga	57
TL	Mkhabela	F	11	Zacheus Malaza Secondary	Mpumalanga	57
MC	Tau	F	11	Zacheus Malaza Secondary	Mpumalanga	57
TA	Msibi	М	10	Zacheus Malaza Secondary	Mpumalanga	57
Н	Nkambule	F	10	Zacheus Malaza Secondary	Mpumalanga	57
Ν	Masombuka	М	10	Zacheus Malaza Secondary	Mpumalanga	57
L	Madu Ana	М	10	Zacheus Malaza Secondary	Mpumalanga	57
MS	Nkosi	F	10	Zacheus Malaza Secondary	Mpumalanga	57
CT	Molobetsi	М	10	Zacheus Malaza Secondary	Mpumalanga	57
TG	Rutsata	F	12	Arundel	Zimbabwe	57
Т	Goodzera	М	12	Wateshed College	Zimbabwe	57
TR	Scholtz	М	11	Redhill	Gauteng	57
А	Abraham	F	12	Redhill	Gauteng	57
JH	Holm	М	12	Bishops	Western Cape	57
R	Mantsha N N	М	12	Patrick Ramaano Secondary	Limpopo	56
LA	Vandermerwe R	F	10	Zacheus Malaza Secondary	Mpumalanga	56
EL	Linda	М	10	Zacheus Malaza Secondary	Mpumalanga	56

CS	Mdluli	М	10	Zacheus Malaza Secondary	Mpumalanga	56
MM	Malatji	F	10	Zacheus Malaza Secondary	Mpumalanga	56
MT	Mthombeni	F	10	Zacheus Malaza Secondary	Mpumalanga	56
	Sono	F	10	Zacheus Malaza Secondary	Mpumalanga	56
Р	Mokgorwane	F	11	Zacheus Malaza Secondary	Mpumalanga	56
NM	Mabaso	М	10	Zacheus Malaza Secondary	Mpumalanga	56
E	Mahomed	М	12	Maritzburg College	KwaZulu-Natal	56
FH	Davidson	М	12	Grantleigh	KwaZulu-Natal	56
ST	Mimanaa	F	12	Arundel	Zimbabwe	56
М	Chaitezvi	F	12	Makomborero Zimbabwe	Zimbabwe	56
М	Manaka	М	12	Jane Furse Comprehensive	Limpopo	56
J	Sloane	М	12	African Leadership Academy	Gauteng	55
NT	Njiowei Tsakeu	М	12	African Leadership Academy	Gauteng	55
MM	Ranzida	М	12	Mbilwi Secondary	Limpopo	55
Ν	Mabena	F	10	Zacheus Malaza Secondary	Mpumalanga	55
СМ	Tlou	F	10	Zacheus Malaza Secondary	Mpumalanga	55
DS	Tshabalala	М	10	Zacheus Malaza Secondary	Mpumalanga	55
SB	Vilakazi	М	10	Zacheus Malaza Secondary	Mpumalanga	55
М	Mavimbela	F	10	Zacheus Malaza Secondary	Mpumalanga	55
AS	Sekele	М	10	Zacheus Malaza Secondary	Mpumalanga	55
KN	Motha	F	10	Zacheus Malaza Secondary	Mpumalanga	55
MK	Mmako	М	10	Zacheus Malaza Secondary	Mpumalanga	55
NK	Matepsa	F	10	Zacheus Malaza Secondary	Mpumalanga	55
ZS	Nkosi	F	10	Zacheus Malaza Secondary	Mpumalanga	55
ΡZ	Jolingana	F	10	Zacheus Malaza Secondary	Mpumalanga	55
ST	Hlongwane	F	11	Zacheus Malaza Secondary	Mpumalanga	55
MA	Maseko	F	10	Zacheus Malaza Secondary	Mpumalanga	55
TV	Bilankulu	М	10	Zacheus Malaza Secondary	Mpumalanga	55
JH	Shongwe	F	10	Zacheus Malaza Secondary	Mpumalanga	55
WK	Maleke	М	10	Zacheus Malaza Secondary	Mpumalanga	55
NP	Ranqela	F	10	Zacheus Malaza Secondary	Mpumalanga	55
GN	Mahalangu	М	10	Zacheus Malaza Secondary	Mpumalanga	55
SS	Dlamini	М	12	Maritzburg College	KwaZulu-Natal	55
BM	Pahla	М	12	Lamplough Senior Secondary	Eastern Cape	55
AG	Gaddie	М	12	King David High School	Gauteng	54
W	Kotzee	М	11	Alma Mater International	Gauteng	54
L	Malebana	М	12	Mmantutule Secondary	Limpopo	54
WP	Peyana	М	12	Midrand High	Gauteng	54
К	Wilkinson	F	12	Herschel Girls	Western Cape	54
SS	Kubhayi	М	12	Masitakhe Secondary	Mpumalanga	54

					1	
GS	Vilakazi	F	10	Zacheus Malaza Secondary	Mpumalanga	54
SN	Vilakazi	М	10	Zacheus Malaza Secondary	Mpumalanga	54
BO	Masilela	F	10	Zacheus Malaza Secondary	Mpumalanga	54
KS	Mtsweni	F	10	Zacheus Malaza Secondary	Mpumalanga	54
MC	Mahlase	М	10	Zacheus Malaza Secondary	Mpumalanga	54
KP	Sondlane	F	10	Zacheus Malaza Secondary	Mpumalanga	54
NE	Gininda	F	10	Zacheus Malaza Secondary	Mpumalanga	54
MJ	Mavimbela	F	10	Zacheus Malaza Secondary	Mpumalanga	54
ΗM	Mabena	F	10	Zacheus Malaza Secondary	Mpumalanga	54
NP	Nhlapo	F	10	Zacheus Malaza Secondary	Mpumalanga	54
ZS	Mokoena	F	10	Zacheus Malaza Secondary	Mpumalanga	54
PP	Masilela	F	10	Zacheus Malaza Secondary	Mpumalanga	54
JM	Massema	М	10	Zacheus Malaza Secondary	Mpumalanga	54
PN	Gazina	М	10	Zacheus Malaza Secondary	Mpumalanga	54
K	Makola	М	10	Zacheus Malaza Secondary	Mpumalanga	54
TG	Sebeshu	М	10	Zacheus Malaza Secondary	Mpumalanga	54
SS	Mahlangu	F	10	Zacheus Malaza Secondary	Mpumalanga	54
EN	Sibiya	М	10	Zacheus Malaza Secondary	Mpumalanga	54
RP	Malomane	F	10	Zacheus Malaza Secondary	Mpumalanga	54
TS	Motsoeneng	М	10	Zacheus Malaza Secondary	Mpumalanga	54
Y	Akoo	М	12	Maritzburg College	KwaZulu-Natal	54
Y	Kim	F	12	Meridian Pinehurst	Western Cape	54
MS	Hartogh	М	12	Star College Bridgetown	Western Cape	53
А	Kraitzick	М	12	King David High School	Gauteng	53
LT	Baloyi	М	11	Hluvuka High	Limpopo	53
KI	Shipalana	М	10	Zacheus Malaza Secondary	Mpumalanga	53
КМ	Masuku	М	10	Zacheus Malaza Secondary	Mpumalanga	53
NB	Mokwe A	F	10	Zacheus Malaza Secondary	Mpumalanga	53
MS	Mahlangu	F	10	Zacheus Malaza Secondary	Mpumalanga	53
NM	Monyepao	М	10	Zacheus Malaza Secondary	Mpumalanga	53
ZP	Chabangu	F	10	Zacheus Malaza Secondary	Mpumalanga	53
ТМ	Mahlangu	М	10	Zacheus Malaza Secondary	Mpumalanga	53
NT	Magagula	М	10	Zacheus Malaza Secondary	Mpumalanga	53
LP	Thela	F	10	Zacheus Malaza Secondary	Mpumalanga	53
Р	Malaza	F	10	Zacheus Malaza Secondary	Mpumalanga	53
ZF	Sibiya	F	10	Zacheus Malaza Secondary	Mpumalanga	53
TT	Thejwanee	F	10	Zacheus Malaza Secondary	Mpumalanga	53
AT	Mashaba	F	10	Zacheus Malaza Secondary	Mpumalanga	53
М	Madire	F	10	Zacheus Malaza Secondary	Mpumalanga	53
ТН	Moyane	М	10	Zacheus Malaza Secondary	Mpumalanga	53

NC	Nkosi	F	10	Zacheus Malaza Secondary	Mpumalanga	53
NM	Nkoana	М	12	Makgoka High	Limpopo	53
YN	Odayar	М	12	Star College Durban	KwaZulu-Natal	53
FT	Steenkamp	М	12	Thomas More College	KwaZulu-Natal	53
К	Naidoo	М	12	Crawford La Lucia	KwaZulu-Natal	53
AN	Nair	М	12	King Edward High	Eastern Cape	53
BG	Baleni	М	12	St John's College	Eastern Cape	53
MT	Islam	М	12	Umtata High	Eastern Cape	53
E	Warhurst	F	11	Chisipite Senior	Zimbabwe	53
EA	Sakupwanya	F	12	Chisipite Senior	Zimbabwe	53
TT	Mataka	М	12	Makomborero Zimbabwe	Zimbabwe	53
СР	Dicey	М	11	Bishops	Western Cape	53
I	Badenhorst	М	12	Outeniqua High	Western Cape	53
AJ	Jaffer	М	12	Claremont High	Western Cape	52
AH	Hamdulay	F	12	Star College Cape Town	Western Cape	52
CR	Ramonetha	F	10	Rasema Secondary	Limpopo	52
MR	Makgato	F	10	Rasema Secondary	Limpopo	52
ME	Sihlangu	М	12	Leap Science And Maths	Limpopo	52
MS	Goolam	М	11	Greenside High	Gauteng	52
М	Sigawuke	М	12	Masitakhe Secondary	Mpumalanga	52
CS	Mashilangwako	F	10	Zacheus Malaza Secondary	Mpumalanga	52
S	Sibuyi	М	10	Zacheus Malaza Secondary	Mpumalanga	52
JJ	Jali	F	10	Zacheus Malaza Secondary	Mpumalanga	52
U	Mtolo	М	10	Zacheus Malaza Secondary	Mpumalanga	52
NS	Ndabezithan	М	10	Zacheus Malaza Secondary	Mpumalanga	52
LP	Thenjwayo	F	10	Zacheus Malaza Secondary	Mpumalanga	52
NM	Sibanyoni	М	10	Zacheus Malaza Secondary	Mpumalanga	52
KW	Mankgane	F	10	Zacheus Malaza Secondary	Mpumalanga	52
SJ	Mashiane	М	10	Zacheus Malaza Secondary	Mpumalanga	52
TE	Koman E	М	10	Zacheus Malaza Secondary	Mpumalanga	52
LN	Msimango	F	10	Zacheus Malaza Secondary	Mpumalanga	52
NT	Mahlangu	F	10	Zacheus Malaza Secondary	Mpumalanga	52
LE	Kunenev	М	10	Zacheus Malaza Secondary	Mpumalanga	52
KJ	Masango	М	10	Zacheus Malaza Secondary	Mpumalanga	52
SK	Malope	F	10	Zacheus Malaza Secondary	Mpumalanga	52
NM	Longwe	М	10	Zacheus Malaza Secondary	Mpumalanga	52
J	Collocott	М	12	Maritzburg College	KwaZulu-Natal	52
	Rushesha	F	12	Chisipite Senior	Zimbabwe	52
UM	Magava	F	11	Chisipite Senior	Zimbabwe	52
М	Jackson	М	11	Star College Bridgetown	Western Cape	51

NL	Loubser	F	11	Protea Heights Academy	Western Cape	51
GT	Sekati	М	12	Mmankala Technical and Commercial	North West	51
А	Nemukula	М	12	Patrick Ramaano Secondary	Limpopo	51
PS	Mavundla	F	10	Zacheus Malaza Secondary	Mpumalanga	51
ТВ	Bilanku Lu	М	10	Zacheus Malaza Secondary	Mpumalanga	51
GC	Masus	М	10	Zacheus Malaza Secondary	Mpumalanga	51
С	Mngomezulu	М	10	Zacheus Malaza Secondary	Mpumalanga	51
NT	Mahlalela	М	10	Zacheus Malaza Secondary	Mpumalanga	51
MA	Zulu	F	10	Zacheus Malaza Secondary	Mpumalanga	51
MT	Ngulele	F	10	Zacheus Malaza Secondary	Mpumalanga	51
SY	Ngomane	F	10	Zacheus Malaza Secondary	Mpumalanga	51
ST	Tshabangu	F	10	Zacheus Malaza Secondary	Mpumalanga	51
NW	Mthombeni	М	10	Zacheus Malaza Secondary	Mpumalanga	51
NM	Skhosana	F	10	Zacheus Malaza Secondary	Mpumalanga	51
СТ	Mampane	М	10	Zacheus Malaza Secondary	Mpumalanga	51
Ν	Masilela	F	10	Zacheus Malaza Secondary	Mpumalanga	51
SC	Mbonane	М	10	Zacheus Malaza Secondary	Mpumalanga	51
JT	Langa	М	10	Zacheus Malaza Secondary	Mpumalanga	51
КТ	Kwakhe	F	12	St John's College	Eastern Cape	51
ТМ	Mbudzi	F	11	Chisipite Senior	Zimbabwe	51
AN	Nyachiya	F	11	Chisipite Senior	Zimbabwe	51
ТС	Nyamwiwa	F	12	Chisipite Senior	Zimbabwe	51
ММ	Marere	М	12	Watershed College	Zimbabwe	51
AM	Mambo	F	12	Redhill	Gauteng	51
IB	Bansal	М	11	Redhill	Gauteng	51
GS	Terblanche	М	12	Stirling High	Eastern Cape	51
MJ	Makgalo	F	12	Rasema Secondary	Limpopo	50
Ν	Qebelu	М	10	Zacheus Malaza Secondary	Mpumalanga	50
ММ	Mohlakwana	F	10	Zacheus Malaza Secondary	Mpumalanga	50
MY	Mthombeni	F	10	Zacheus Malaza Secondary	Mpumalanga	50
PL	Hlatshwayo	F	10	Zacheus Malaza Secondary	Mpumalanga	50
NH	Mahlangu	F	10	Zacheus Malaza Secondary	Mpumalanga	50
DK	Komane	F	10	Zacheus Malaza Secondary	Mpumalanga	50
MS	Phiri V	М	10	Zacheus Malaza Secondary	Mpumalanga	50
F	Moola	F	10	Zacheus Malaza Secondary	Mpumalanga	50
SV	Sukazi	М	10	Zacheus Malaza Secondary	Mpumalanga	50
SJ	Hleza	М	10	Zacheus Malaza Secondary	Mpumalanga	50
AT	Mgwenya	М	10	Zacheus Malaza Secondary	Mpumalanga	50
А	Khoza	F	10	Zacheus Malaza Secondary	Mpumalanga	50

CS	Sim	F	12	Thomas More College	KwaZulu-Natal	50
S	Mavundla	М	11	Vryheid Comprehensive	KwaZulu-Natal	50
HN	Kunene	М	12	Vryheid Comprehensive	KwaZulu-Natal	50
PP	Shah	F	12	Arundel	Zimbabwe	50
JR	Cokayne	М	10	Redhill	Gauteng	50
DV	Van Nimwegen	М	11	Bishops	Western Cape	50
PD	Mccausland	М	12	Stirling High	Eastern Cape	50



### Life Sciences Results 2019

Initials	Surname	Gender	School Name	Province	Grade	Total
KG	Mapika	F	Gateway High	Zimbabwe	12	90
МС	Ramulongo	М	Livha Combined School	Limpopo	12	88
LT	Nyarambi	М	Makomborero Zimbabwe	Zimbabwe	12	85
LM	Lubowa	М	African Leadership Academy	Gauteng	11	82
Р	Gadri	М	African Leadership Academy	Gauteng	12	81
Ν	Fakude	F	St Matthews Secondary	Gauteng	12	76
MM	Montsi	F	Sekgutlong High	Free state	12	75
Ν	Katsidzira	М	Makomborero zimbabwe	Zimbabwe	12	73
F	Buti	F	St Matthews Secondary	Gauteng	12	73
DM	Kinyua	М	African Leadership Academy	Gauteng	12	72
LR	Sefako	М	Sekgutlong High	Free state	12	71
RE	Mokotedi	М	Sekgutlong High	Free state	12	71
L	Mokoena	F	Sekgutlong High	Free state	12	70
KJ	Hadebe	М	Sekgutlong High	Free state	12	70
IB	Masinde	М	ST Joseph's CBC Bloemfontein	Free state	12	70
ST	Titipana	М	Sekgutlong High	Free state	12	69
KE	HI atswayo	М	Sekgutlong High	Free state	12	69
LF	Mothibeli	М	Sekgutlong High	Free state	12	69
RF	Sootho	F	Sekgutlong High	Free state	12	69
Ν	Vilakazi	F	St Matthews Secondary	Gauteng	12	69
NL	Lorgat	М	Ahmed Timol	Gauteng	12	68
А	Kalariparampil	М	Umtata high school	Eastern Cape	11	67
В	Molele	М	TembisaSecondary	Gauteng	12	67
D	Ntlalwe	F	Unicom Agriculture Secondary	Free state	12	66
GL	Louw	М	Grantleigh	KwaZulu-Natal	12	66
FH	Davidson	М	Grantleigh	KwaZulu-Natal	12	66
VC	Chado	F	Arundel	Zimbabwe	10	66
CR	Venter	F	St Dominics Priory	Eastern Cape	12	65
Υ	Ebrahim	М	Star College Bridge Town	Western Cape	11	65
CJ	Martin	М	South Peninsula High	Western Cape	12	65
А	Kistan	М	Werda school	KwaZulu-Natal	12	65
К	Steyn	F	Potchefstroom Gimnasium	North West	12	64
ТВ	Rammutloa	М	El Shaddai Christian School Christian	Western Cape	12	64
Υ	Boshoff	F	Hoerskool Swellendam	Western Cape	12	64
TM	Mutiracha	F	Arundel	Zimbabwe	12	64

М	Rakei	F	St Matthews Secondary	Gauteng	12	64
R	Kahanovitz	F	Herzlia high school	Western Cape	12	64
ME	Sihlangu	М	Leap Science and Maths	Limpopo	12	64
М	Ravele	F	Mbilwi Secondary	Limpopo	12	64
NS	Mogodi	М	ST Marks College	Limpopo	12	64
J	Botes	F	Helpmekaar Kollege	Gauteng	12	64
KS	Mokoena	М	Sekgutlong High	Free state	12	63
В	Tsiane	М	Setjhaba Se Maketse	Free state	12	63
RI	Moreki	М	Setjhaba Se Maketse	Free state	12	63
E	Van lingen	М	Hoerskool Bultfontein	Free state	12	63
KR	Rampersad	М	Star College Durban	KwaZulu-Natal	12	63
S	Hammerschmidt	М	Grey High	Eastern Cape	11	63
FN	Ngwerume	F	St Dominics Priory	Eastern Cape	12	63
LB	Johnstone	М	Stirling High	Eastern Cape	12	63
AJ	Naidu	М	Eden College Durban	KwaZulu-Natal	12	63
S	Zimunya	F	Gateway high	KwaZulu-Natal	12	63
MN	Ndhlovu	М	Ahmed Timol	Gauteng	12	63
SL	Lorgat	М	Ahmed Timol	Gauteng	12	63
AL	Adam	М	ST Joseph's CBC Bloemfontein	Free state	12	62
МС	Scrase	F	Grantleigh	KwaZulu-Natal	12	62
NY	Alam	М	Grey High	Eastern Cape	12	62
S	Hans	F	VM Kwinana Senior	Eastern Cape	12	62
DK	Krimchanski	F	El Shaddai Christian School Christian	Western Cape	12	62
TG	Manyame	F	Makomborero Zimbabwe	Zimbabwe	12	62
GK	Bhila	F	Arundel	Zimbabwe	12	62
ТМ	Murambiwa	F	Arundel	Zimbabwe	12	62
PW	Mlondo	М	Mtubatuba High	KwaZulu-Natal	12	62
BE	Stark	F	Potchefstroom Gimnasium	North West	12	61
BB	Mavumengwana	М	St John's College	Eastern Cape	12	61
IR	Ruiters	М	Hugenote	Western Cape	12	61
AJ	Jaffer	М	Claremont high	Western Cape	12	61
К	Coetzer	F	Somerset West Private	Western Cape	12	61
0	Mberenga	М	Makomborero Zimbabwe	Zimbabwe	12	61
L	Masala	М	Butterworth High	Eastern Cape	11	61
G	Labe	М	Herzlia High	Western Cape	12	61
J	Katzeff	F	Herzlia High	Western Cape	12	61
SA	Hlatshwayo	М	Thomas Nhlabathi	Mpumalanga	11	61
KP	Saia	F	Thomas Nhlabathi	Mpumalanga	12	61
ТА	Nkosi	F	Thomas Nhlabathi	Mpumalanga	12	61

К	Maphanga	М	Ramatshagalala	Limpopo	11	61
GA	Agar	F	Redhill	Gauteng	12	61
ΤZ	Mchunu	М	New Horizon College	Free state	12	60
R	None	F	Bloemfontein South High	Free state	12	60
В	Mosuhli	М	Setjhaba Se Maketse	Free state	12	60
IN	Masinde	F	ST Joseph's CBC Bloemfontein	Free state	12	60
NF	Lushozi	М	Maritzburg college	KwaZulu-Natal	12	60
AR	Nepaul	М	Star College Durban	KwaZulu-Natal	12	60
S	Poswayo	F	St Johns College	Eastern Cape	12	60
AM	Snyman	F	El Shaddai Christian School Christian	Western Cape	10	60
BC	Combrink	М	Paul Roos Gymnsium	Western Cape	11	60
SM	Marisa	F	Arundel	Zimbabwe	12	60
S	Ngqwangi	F	Cameron Ngudle	Eastern Cape	11	60
L	Mathomane	М	Mariazell Senior	Eastern Cape	12	60
AE	Mtshweni	F	Thomas Nhlabathi	Mpumalanga	12	60
КМ	Malepe	М	ST Marks College	Limpopo	12	60
W	Kotze	М	Alma Mater International	Gauteng	11	60
J	Sloane	М	African Leadership Academy	Gauteng	12	60
М	Van vuuren	F	Afrikaanse Hoër Meisieskool	Gauteng	12	60
UJ	Asuquo	F	African Leadership Academy	Gauteng	12	60
LT	Klou	F	Dalpark Secondary	Gauteng	12	60
MG	Ngema	F	Mondeor High	Gauteng	12	60
I	Strauss	F	Voortrekker	Free state	12	59
Р	Mokoena	F	Sasolburg High	Free state	12	59
DE	Ntopo	F	Unicom Agricuitural Secondary	Free state	12	59
SY	Lee	М	St Andrew's Bloemfontein	Free state	12	59
AT	Tsiftsis	М	St Andrew's Bloemfontein	Free state	12	59
М	Mofolo	М	Setjhaba Se Maketse	Free state	12	59
TL	Kodisang	F	Albert Moroka High	Free state	12	59
DJ	Conradie	М	Hoerskool Bultfontein	Free state	12	59
ZK	Kola	М	Alhuda Muslim	North West	12	59
S	Neethling	F	Potchefstroom Gimnasium	North West	12	59
S	Mavundla	М	Vryheid Comprehensive Secondary	KwaZulu-Natal	11	59
К	Harischandre	М	Maritzburg College	KwaZulu-Natal	12	59
RP	Vanstraaten	М	Pinetown Boys High	KwaZulu-Natal	12	59
CA	Bosch	F	Crawford La Lucia	KwaZulu-Natal	12	59
МК	Kir k	М	Graeme College	Eastern Cape	12	59
NJ	Clark	F	Stirling High	Eastern Cape	12	59
Р	Mccausland	М	Stirling High	Eastern Cape	12	59

М	Mpondo	М	Stirling High	Eastern Cape	12	59
S	Alex	М	Umtata High	Eastern Cape	12	59
J	Snyman	М	El Shaddai Christian School Christian	Western Cape	12	59
С	Stemmet	М	Langenhoven Gimnasium	Western Cape	12	59
D	Lee	М	Rondebosch Boys High	Western Cape	12	59
MW	Watambgwa	F	Chisipite Senior	Zimbabwe	12	59
NB	Banda	F	Chisipite Senior	Zimbabwe	12	59
JF	Nyamahowa	F	Arundel	Zimbabwe	12	59
W	Mthethwa	F	Inkamana high	KwaZulu-Natal	12	59
R	Tshinavhe	М	Thengwe high	Limpopo	12	59
S	Levetan	F	Herzlia High	Western Cape	11	59
ТМ	Manwadu	F	Mbilwi Secondary	Limpopo	12	59
МС	Matlala	F	Taxila Secondary	Limpopo	12	59
EL	Francis	F	Bracken High	Gauteng	12	59
R	Pieters	М	Trinity House Littlefalls	Gauteng	12	59
F	Venter	М	Hoerskool Riebeeckrand	Gauteng	12	59
N	Mashele	F	Sir Pierre Van Ryneveld	Gauteng	12	59
СМ	Mabusela	М	Mondeor High	Gauteng	12	59
AM	Malete	F	Khamane Secondary	Mpumalanga	12	58
DL	Manqutu	F	Teto High	Free state	12	58
Н	Khosana	F	Teto High	Free state	12	58
MM	Mahomed	F	Epworth High	KwaZulu-Natal	12	58
LA	Diedricks	М	Maritzburg College	KwaZulu-Natal	12	58
DC	Okoli	М	Pinetown Boys High	KwaZulu-Natal	12	58
ΚT	Maharaj	М	Star College Durban	KwaZulu-Natal	11	58
MK	Karim	М	Star College Durban	KwaZulu-Natal	12	58
ZL	Meneses	F	Crawford La Lucia	KwaZulu-Natal	12	58
FF	Floris	F	Claremont High	Western Cape	12	58
DH	Petersen	М	Fairbairn College	Western Cape	12	58
М	Harris	F	South Peninsula High	Western Cape	12	58
Ν	Lemmetjies	F	Kimberle Girls High	Northern Cape	12	58
MB	Blassoples	F	Kimberley Girls High	Northern Cape	12	58
Ρ	Guveya	F	Chisipite Senior	Zimbabwe	12	58
AR	Rukuni	F	Chisipite Senior	Zimbabwe	12	58
FB	Bhamjee	F	Chisipite Senior	Zimbabwe	11	58
IA	Mlauzi	F	Arundel	Zimbabwe	11	58
А	Mavhungu	М	Thengwe High	Limpopo	12	58
RE	Mudau	М	Thengwe High	Limpopo	11	58
KR	January	F	Jeppe Girls	Gauteng	12	58

BM	Mokwana	F	Moreko Secondary	Limpopo	12	58
AM	Rakgalakane	F	Moreko Secondary	Limpopo	12	58
MD	Mas akoe	М	Sebitja Secondary	Limpopo	12	58
	Ndaba	М	Sunward Park	Gauteng	12	58
К	Koekemoer	F	Afrikaanse Hoër Meisieskool	Gauteng	11	58
Т	Coetzer	М	Alberton High	Gauteng	12	58
NT	Njiowei tsakeu bra	м	African Leadership Academy	Gauteng	12	58
А	Loon at	F	Lenasia Muslim School	Gauteng	12	58
К	Till	F	Redhill	Gauteng	11	58
R	Mackridge	м	Helpmekaar Kollege	Gauteng	12	58
Т	Masopha	F	Ficksburg CSS	Free state	12	57
А	Zitzke	F	Afrikaanse Hoërskool Kroonstad	Free state	12	57
MM	Sefatsa	F	Sasolburg High	Free state	12	57
Т	Booyens	М	Sasolburg High	Free state	12	57
RJ	Wilke	М	Bloemfontein High	Free state	12	57
OK	Mahupela	М	Bloemfontein High	Free state	12	57
М	Strydom	F	Oranje Meisieskool	Free state	12	57
G	Von eschwege	F	Oranje Meisieskool	Free state	12	57
AY	Yu	М	St Andrew's Bloemfontein	Free state	12	57
F	Kruger	F	Bothaville Hoerskool	Free state	12	57
L	Bertling-Roodt	F	Epworth High	KwaZulu-Natal	12	57
ZA	Meyer	F	Grantleigh	KwaZulu-Natal	12	57
ST	Soorju	М	Maritzburg College	KwaZulu-Natal	12	57
BM	Pahla	М	Lamplough Senior Secondary	Eastern Cape	12	57
S	Magabitshana	М	Lutateni SSS	Eastern Cape	10	57
L	Bester	F	Pearson High	Eastern Cape	12	57
GG	Gonzalez	F	St Dominics Priory	Eastern Cape	12	57
А	Eichstadt	F	Stirling High	Eastern Cape	12	57
Р	Vineeskumar	F	Umtata High school	Eastern Cape	11	57
HA	Lombard	М	Paul Roos Gymnasium	Western Cape	11	57
DM	Moller	М	Paul Roos Gymnasium	Western Cape	11	57
FJ	Swanepoel	М	Paul Roos Gymnasium	Western Cape	11	57
KK	Murwira	F	St Dominics Priory	Zimbabwe	12	57
MR	Mandiwona	F	Arundelschool	Zimbabwe	10	57
С	Visser	F	Privaatskool Elnatan	Namibia	12	57
G	Nchabeleng		Glencowie Secondary	Limpopo		57
L	Mulaisi	М	Thengwe High	Limpopo	12	57
J	Booyse n	F	Hoerskool Hans Strijdom	Limpopo	11	57
BD	Matlejoane	М	Leap Science and Maths	Limpopo	12	57
MA	Ganyane	F	Patrick Ramaano	Limpopo	12	57

Ρ	Makhomu	М	Tshivhase Secondary	Limpopo	12	57
	Mabe	М	Sunward Park	Gauteng	12	57
J	Kruger	F	Afrikaanse Hoër Meisieskool	Gauteng	12	57
А	Vermaak ndlovu	М	Hoerskool Birchleigh	Gauteng	12	57
HJ	Groenewald	М	Hoerskool John Vorster	Gauteng	11	57
MM	Monteiro	М	ST Dunstans College	Gauteng	12	57
LJ	Nel	М	ST Albans College	Gauteng	12	57
GM	Muller	F	Redhill	Gauteng	11	57
R	Bhyat	М	Redhill	Gauteng	12	57
Т	Grant	F	Helpmekaar Kollege	Gauteng	12	57
Ν	Van rooyen	М	Afrikaanse Hoërskool Kroonstad	Free state	12	56
М	Molotsi	М	Unicom Agricultural Secondary	Free state	12	56
KE	Raleting	М	Unicom Agricultural Secondary	Free state	12	56
SG	Letanta	М	St Andrew's Bloemfontein	Free state	12	56
SS	Monokoa	F	Setjhaba Se Maketse	Free state	12	56
RJ	Mkhethi	F	Albert Moroka High	Free state	12	56
NQ	Lephafa	F	Teto High	Free state	12	56
AK	Makgalema	М	Teto High	Free state	12	56
М	De winnaar	F	Hoerskool Sentraal	Free state	12	56
TG	Mareletse	М	Phiritona High	Free state	12	56
В	Vollenhoven	М	Pinetown Boys High	KwaZulu-Natal	11	56
SR	Randeree	М	Star College Durban	KwaZulu-Natal	12	56
FV	Vawda	F	Star College Durban	KwaZulu-Natal	12	56
MY	Moosa hassim	М	Al Azhar High	Eastern Cape	11	56
S	Brandt	М	Paul Roos Gymnasium	Western Cape	11	56
AB	Vorster	М	Paul Roos Gymnasium	Western Cape	11	56
JL	Corker	М	South Peninsula High	Western Cape	12	56
SM	Muirimi	F	Chisipite Senior	Zimbabwe	12	56
	Van wyk	М	Privaatskool Moria	Namibia	12	56
WM	Manakaza	F	Cameron Ngudle	Eastern Cape	11	56
S	Collins	М	Grey High	Eastern Cape	12	56
LJ	Boloka	М	Thomas Nhlabathi	Mpumalanga	12	56
OK	Kgatle	F	Leap Science and Maths	Gauteng	12	56
К	Pale	F	Lemetja	Limpopo	12	56
Ν	Makua	F	Leap Science and Maths	Limpopo	12	56
МК	Mashilo	F	Leap Science and Maths	Limpopo	11	56
ND	Seshibedi	М	Mokomene High	Limpopo	11	56
MA	Matlala	F	Moreko High	Limpopo	12	56
TP	Rambuda	М	Tshivhase Secondary	Limpopo	12	56
MN	Mukwevho	F	Tshivhase Secondary	Limpopo	12	56

0	Mashaba	F	Risinga High	Limpopo	12	56
DM	Boshego	М	Serokolo	Limpopo	12	56
NF	Musin adi	F	Sunward Park	Gauteng	12	56
AB	Bharati	М	Azaadbille Muslim	Gauteng	12	56
R	Dangor	F	Azaadbille Muslim	Gauteng	12	56
MA	Peer	М	Lenasia Muslim School	Gauteng	10	56
ZC	Cassim	F	Lenasia Muslim School	Gauteng	12	56
MR	Dindar	М	Lenasia Muslim School	Gauteng	11	56
RR	Kubeka	F	Mondeor High	Gauteng	12	56
Т	Legodi	F	Mondeor High	Gauteng	12	56
NB	Baloyi	М	Moses Maren Mission	Gauteng	12	56
S	Ndiki	F	Simons Town School	Western Cape	12	56
ТС	Nkalanga	F	Sikhwahlane Secondary	Mpumalanga	12	55
LT	Seseane	М	Bluegumbosch Secondary	Free state	12	55
BL	Leburu	М	Zenith	Free state	12	55
HW	Hernandez	М	Castle Bridge	Free state	12	55
TL	Campbell	F	Bloemfontein High	Free state	12	55
JA	mccarthy	М	St Andrew's Bloemfontein	Free state	12	55
Т	Mohale	F	ST Joseph's CBC Bloemfontein	Free state	12	55
N	Martins	F	Teto High	Free state	12	55
J	Klopper	М	Potchefstroom Gimnasium	North West	12	55
R	Moloi	F	Sol Plaatje Secondary	North West	12	55
NS	Kunene	F	Vryheid Comprehensive Secondary	KwaZulu-Natal	10	55
HN	Kunene	М	Vryheid Comprehensive Secondary	KwaZulu-Natal	12	55
VJ	Kunene	М	Pinetown Boys High	KwaZulu-Natal	12	55
Ν	Nyembe	М	St Lewis Bertrand High	KwaZulu-Natal	12	55
К	Subramanien	М	Star College Durban	KwaZulu-Natal	11	55
YN	Odayar	М	Star College Durban	KwaZulu-Natal	12	55
К	Yu	М	Crawford La Lucia	KwaZulu-Natal	11	55
С	Naidoo	F	Crawford La Lucia	KwaZulu-Natal	12	55
М	Manamathela	М	Lutateni SSS	Eastern Cape	10	55
JJ	Jonah john	М	Umtata High	Eastern Cape	11	55
SM	Mqina	М	VM Kwinana Senior	Eastern Cape	12	55
КО	Ontong	М	Paarl Boys High	Western Cape	12	55
С	Fick	М	Paarl Boys High	Western Cape	12	55
LR	Adamson	F	York High	Western Cape	11	55
JJ	Evers	М	Els Shaddai Christian	Western Cape	12	55
MF	Farrell	F	HMS La Rochelle GHS	Western Cape	12	55
МН	Conradie	М	Paul Roos Gymnasium	Western Cape	12	55

A	Bekko	М	South Peninsula High	Western Cape	12	55
LA	Carolissen	М	South Peninsula High	Western Cape	12	55
PA	Wanink	F	Watershed College	Zimbabwe	12	55
SK	Kadurira	F	Chisipite Senior	Zimbabwe	12	55
E	Warhurst	F	Chisipite Senior	Zimbabwe	11	55
	Rukuni	М	Grosvenor Boy High	KwaZulu-Natal	10	55
LEA	Renard	F	Thomas more college	KwaZulu-Natal	12	55
S	Kekana	F	Glencowie Secondary	Limpopo		55
М	Manaka	М	Jane Furse Comprehensive	Limpopo	12	55
NJ	Phahlamohlaka	М	Jane Furse Comprehensive	Limpopo	12	55
L	Ngqwangi	F	Cameron Ngudle	Eastern Cape	12	55
L	Peyron	F	Herzlia High	Eastern Cape	12	55
HA	Mhlarhi	М	Thomas Nhlabathi	Mpumalanga	12	55
DS	Moshoadibe	F	Thomas Nhlabathi	Mpumalanga	12	55
тс	Madihlaba	F	Moreko Secondary	Limpopo	12	55
R	Mantsha	М	Patrick Ramaano	Limpopo	12	55
PM	Mothiba	М	Mountainview High	Limpopo	12	55
А	Tshivhase	F	Tshivhase Secondary	Limpopo	12	55
GE	Tshivhase	М	Tshivhase Secondary	Limpopo	12	55
А	Makama	F	Sunward Park	Gauteng	12	55
SM	Palamootil	М	Alberton High	Gauteng	12	55
ET	Twala	М	Institute Status Acres	Gauteng	11	55
GV	De villiers	М	ST Albans College	Gauteng	11	55
R	Scriven	М	ST Albans College	Gauteng	12	55
М	Fine	М	Redhill	Gauteng	11	55
AP	Nkhwashu	F	Mondeor High	Gauteng	12	55
N	Bakkes	F	Helpmekaar Kollege	Gauteng	12	55
JL	Malaza	М	Greendale	Mpumalanga	12	54
SS	Sibuyi	М	Lekete High	Mpumalanga	12	54
GK	Mthimunye	М	Ndzundza Mabhoko High	Mpumalanga	11	54
ST	Zwane	F	Pineridge Combined	Mpumalanga	12	54
С	Ferguson	F	Uplands College	Mpumalanga	11	54
КТ	Tau	М	Vukuzame MST	Mpumalanga	12	54
В	Msimanga	М	Mmathabo Senior Secondary	Free state	12	54
MJ	Leopeng	F	Kroonstad CSS	Free state	12	54
PT	Ramathe	F	Bloemfontein South High	Free state	12	54
KP	Mpiti	F	Setjhaba Se Maketse	Free state	12	54
К	Morata	F	Albert Moroka High	Free state	12	54
А	Celliers	F	Staatspresident Swart	Free state	12	54
А	De waal	F	Bothaville Hoerskool	Free state	12	54

SS	Jones	F	Hoerskool Bultfontein	Free state	12	54
Т	Sehloho	М	Teto High	Free state	12	54
RM	Mathibe	F	Welkom High	Free state	12	54
LK	Mostert	F	Potchefstroom Gimnasium	North West	12	54
КК	Mngomezulu	М	Ingwavuma High	KwaZulu-Natal	12	54
NN	Sibiya	F	St Lewis Bertrand High	KwaZulu-Natal	12	54
ZL	Mdunge	F	St Lewis Bertrand High	KwaZulu-Natal	12	54
SN	Zulu	М	Star College Durban	KwaZulu-Natal	12	54
AN	Ndawule	М	Mosa-Sibi S.S.S	Eastern Cape	12	54
В	Gouws	F	Pearson High	Eastern Cape	12	54
LM	Johnson	F	Riebeek College Girls High	Eastern Cape	12	54
JM	Miller	F	Riebeek College Girls High	Eastern Cape	11	54
N	Tsiotsiopoulos	F	St Dominic Priory	Eastern Cape	11	54
A	Ndamase	F	St Johns College	Eastern Cape	12	54
С	Van der west uizen	М	Hugenote	Western Cape	11	54
SA	Faku	F	York high	Western Cape	12	54
AB	Booley	F	Claremont High	Western Cape	12	54
KS	Sadan	М	Claremont High	Western Cape	12	54
Н	Wessels	F	HMS La Rochelle GHS	Western Cape	11	54
СМ	Guder	F	Langenhoven Gimnasium	Western Cape	12	54
AL	Goncalves	М	Paul Roos Gymnasium	Western Cape	11	54
FP	Du toit	М	Paul Roos Gymnasium	Western Cape	12	54
TL	Mugwagwa	F	Arundel	Zimbabwe	12	54
AR	Ngwenya	F	Arundel	Zimbabwe	12	54
LL	Lumka	М	St Matthews Secondary	Gauteng	11	54
М	Netshivhungululu	F	Thengwe high	Limpopo	12	54
LL	Lumka	М	St Matthews Secondary	Gauteng	11	54
ΤN	Gwande	F	Gateway High school	Zimbabwe	12	54
А	Phiri	F	Gateway High school	Zimbabwe	12	54
S	Jack	F	Cameron Ngudle	Eastern Cape	12	54
LD	Dyani	М	Cameron Ngudle	Eastern Cape	11	54
E	Katz	F	Herzlia High	Eastern Cape	12	54
MB	Batembu	F	Riverside College	Eastern Cape	11	54
DT	Monyepao	F	Leap Science and Maths	Gauteng	11	54
L	Mudau	F	Mbilwi Secondary	Limpopo	12	54
NN	Nemaku nani	F	Tshivhase Secondary	Limpopo	11	54
MT	Sekele	F	ST Marks College	Limpopo	11	54
LK	Makola	М	ST Marks College	Limpopo	12	54
MR	Masenya	F	Tembisa Secondary	Gauteng	12	54

ММ	Makhalemele	М	Tembisa Secondary	Gauteng	12	54
LR	Mogable	F	Afrikaanse Hoër Meisieskool	Gauteng	12	54
Y	Ismail	М	Azaadville Muslim	Gauteng	12	54
В	Yaka	F	Hoerskool Birchleigh	Gauteng	11	54
NS	Majola	М	Curtis Nkondo SOS	Gauteng	12	54
G	Msayi	F	ST Martin Deppores	Gauteng	12	54
SS	Skosana	М	ST Martin Deppores	Gauteng	12	54
IM	Jacobs	F	ST Marys DSG	Gauteng	12	54
JB	Visagie	М	Veritas College	Gauteng	11	54
SB	Akbar	F	Lenasia Muslim	Gauteng	12	54
1	Jhetam	F	Lenasia Muslim	Gauteng	12	54
Т	Manyoko e	М	Seana Marena	Gauteng	12	54
SE	Espinoza	F	Redhill	Gauteng	11	54
0	Morris	М	Redhill	Gauteng	12	54
L	Tsautse	F	Simons Town School	Western Cape	12	54
К	Mashiane	F	Khamane Secondary	Mpumalanga	12	53
KA	Anderson	F	Bethlehem Voortrekker High	Free state	12	53
TE	Mooko	М	Mookodi Secondary	Free state	12	53
WJ	Theron	F	Afrikaanse Hoërskool Kroonstad	Free state	12	53
Q	Moloisioa	F	Tsoseletso High	Free state	12	53
ΤZ	Campbell	F	Bloemfontein High	Free state	12	53
Т	Marumo	F	Christiaan de wet	Free state	12	53
JL	Lin	М	Ladybrand secondary	Free state	12	53
ТМ	Mafere	М	Setjhaba Se Maketse	Free state	12	53
Р	Nkhoke	М	Setjhaba Se Maketse	Free state	12	53
Н	Lee	М	St Josephs CBC Bloemfontein	Free state	12	53
М	Lenti	М	Albert Moroka High	Free state	12	53
L	Nyokong	F	Albert Moroka High	Free state	12	53
L	Motsitsi	F	Welkom High	Free state	12	53
PN	Gina	F	Ingwavuma High	KwaZulu-Natal	12	53
AG	Mathenjwa	F	Ingwavuma High	KwaZulu-Natal	12	53
ZI	Ismail	М	Maritzburg College	KwaZulu-Natal	12	53
МС	Darch	М	Maritzburg College	KwaZulu-Natal	11	53
EN	Naidoo	М	Star College Durban	KwaZulu-Natal	11	53
М	Feni	М	Ethembeni Enrichment Centre	Eastern Cape	10	53
LL	Lubelo	М	Holy Cross High	Eastern Cape	11	53
YF	Faleni	F	Khwezi Lomso Comprehensive	Eastern Cape	11	53
S	Gqwetha	М	Lutateni SSS	Eastern Cape	12	53
JR	Rudman	F	Riebeek Girls High	Eastern Cape	11	53
SJ	Kim	М	St Dominics Priory	Eastern Cape	12	53

CV	Vandermerwe	F	St Dominics Priory	Eastern Cape	12	53
А	Nontwana	F	St Johns College	Eastern Cape	12	53
AL	Lottering	М	Umtata high school	Eastern Cape	12	53
М	Gadezwen i	М	Umthawelanga	Eastern Cape	12	53
SH	Potgieter	F	Union high school	Eastern Cape	12	53
KD	Fobian	М	Paarl Boys High	Western Cape	12	53
Т	Sheldon	F	Claremont High	Western Cape	12	53
ZR	Charles	F	Claremont High	Western Cape	12	53
AL	De kock	F	HMS La Rochelle GHS	Western Cape	12	53
AJ	Kritzinger	F	Langenhoven Gmnasium	Western Cape	11	53
PD	Conradie	М	Paul Roos Gymnasium	Western Cape	11	53
М	Vallabh	F	Kimberley Girls High	Northern Cape	12	53
KC	Chakurira	F	Chisipite Senior	Zimbabwe	12	53
SS	Selby	F	Chisipite Senior	Zimbabwe	11	53
Z	Simon	F	Privaatskool Elnatan	Namibia	12	53
NA	Mtshali	F	Inkamana high	KwaZulu-Natal	11	53
NL	Zungu	F	Inkamana high	KwaZulu-Natal	12	53
М	Ngubane	М	Werda	KwaZulu-Natal	11	53
NM	Mlenzana	F	Charlton Vos College	Gauteng	11	53
Р	Sehola	F	Glencowie Secondary	Limpopo		53
Ν	Mphoshomani	М	Thengwe High	Limpopo	12	53
NM	Mlenzana	F	Charlton Vos College	Gauteng	11	53
А	Dlakiya	М	Butterworth High	Eastern Cape	12	53
К	Ndude	F	Butterworth High	Eastern Cape	12	53
Y	Malangeni	F	Butterworth High	Eastern Cape	11	53
Z	Makhaba	М	Cameron Ngudle	Eastern Cape	11	53
TP	Vilakazi	F	Thomas Nhlabathi	Mpumalanga	11	53
0	Blom	F	JC Motumi High	Free state	12	53
WM	Mwandira	F	Bedfordview High	Gauteng	11	53
Т	Makgotho	М	Liberty Community	Gauteng	12	53
TG	Manamela	М	Leap Science and Maths	Limpopo	12	53
FM	Maphutha	F	Leap Science and Maths	Limpopo	12	53
RM	Maila	F	Leap Science and Maths	Limpopo	10	53
MN	Molokomme	М	Mammoka Secondary	Limpopo	11	53
МС	Nengudza	М	Mbilwi Secondary	Limpopo	12	53
MR	Makhomisani	F	Patrick Ramaano	Limpopo	12	53
NR	Netshisahulu	М	Patrick Ramaano	Limpopo	12	53
LS	Mabe	F	Motse Maria	Limpopo	12	53
R	Nemauluma	F	Tshivhase Secondary	Limpopo	11	53
FM	Mabelane	F	ST Marks College	Limpopo	12	53

LO	Bronkhorst	М	Sunward Park	Gauteng	12	53
D	Viljoen	F	Afrikaanse Hoër Meisieskool	Gauteng	10	53
L	Buitendag	F	Alberton High	Gauteng	12	53
Z	Da Silva	F	Alma Mater International	Gauteng	10	53
К	Annandale	F	Afrikaanse Hoër Meisieskool	Gauteng	12	53
0	Zeka	F	Hoerskool Birchleigh	Gauteng	12	53
N	Padayachee	F	Bracken High	Gauteng	12	53
NA	Huma		ST Marys DSG	Gauteng	12	53
СН	Lowman	F	Redhill	Gauteng	10	53
Т	Maxakatha	F	Mondeor High	Gauteng	12	53
0	Langa	М	Simons Town School	Western Cape	11	53
J	Paliso	М	Simons Town School	Western Cape	11	53
BC	Molefe	F	Khamanesecondary	Mpumalanga	11	52
YS	Dlamini	F	Meridian Karino	Mpumalanga	12	52
BL	Zitha	F	Sikhwahlane Secondary	Mpumalanga	12	52
SD	Skhosana	F	Skhila Secondary	Mpumalanga	12	52
NA	Mashaba	F	Vukuzame MST	Mpumalanga	12	52
LA	Wessels	F	Bethlehem Voortrekker High	Free state	12	52
J	Van wyk	М	Afrikaanse Hoërskool Kroonstad	Free state	12	52
A	Van biljon	F	Afrikaanse Hoërskool Kroonstad	Free state	12	52
E	Vanaardt	М	Kroonstad CSS	Free state	12	52
СР	Peach	F	Hoërskool Heilbron	Free state	12	52
МС	Letsie	М	Mariasdal High	Free state	12	52
VG	Baadjies	М	Unicom Agricutural Secondary	Free state	12	52
Т	Koma	М	Unicom Agricutural Secondary	Free state	12	52
DD	Weimers	М	Bloemfontein High	Free state	12	52
LI	Moruthane e	F	Bloemfontein South High	Free state	12	52
L	De wet	F	Sekondere Meisieskool	Free state	12	52
СС	Lee	М	St Andrews Bloemfontein	Free state	12	52
GA	Нау	М	Christiaan de wet	Free state	12	52
BM	Mitchell	F	Tlotlanangcombined	Free state	12	52
VG	Mokhele	М	Setjhaba Se Maketse	Free state	12	52
TR	Morapedi	F	Mophate High	Free state	12	52
PM	Mojaki	F	Mophate High	Free state	12	52
G	Kemp	М	Bothaville High	Free state	12	52
М	Peach	F	Bothaville High	Free state	12	52
F	Smit	М	Hoerskool Sentraal	Free state	12	52
CE	Moffett	F	Epworth High	KwaZulu-Natal	12	52
J	Dundas starr	F	Epworth High	KwaZulu-Natal	12	52
BP	Ndabandaba	F	Ingwavuma High	KwaZulu-Natal	11	52

NM	Zikalala	F	Ingwavuma High	KwaZulu-Natal	11	52
E	Hamadziripi	М	Maritzburg College	KwaZulu-Natal	12	52
SL	Ngema	М	Nkwenwezi Secondary	KwaZulu-Natal	12	52
CG	Gounden	М	Star College Durban	KwaZulu-Natal	11	52
К	Panday	F	Star College Durban	KwaZulu-Natal	12	52
HI	Ismail	F	Star College Durban	KwaZulu-Natal	12	52
EQ	Qhina	М	Kwakomani Comprehensive	Eastern Cape	10	52
S	Buga	F	Lamplouga Senior Secondary	Eastern Cape	12	52
EO	Okoh	М	Lamplouga Senior Secondary	Eastern Cape	12	52
BE	Massart burns	F	Pearson high school	Eastern Cape	11	52
SN	Kilfoil	F	Pearson high school	Eastern Cape	12	52
G	Theu nissen	F	St Dominics Priory	Eastern Cape	10	52
ОМ	Mcube	F	Umtata International	Eastern Cape	12	52
AP	Louw	М	Hugenote	Western Cape	12	52
E	Scriba	М	Paarl Boys High	Western Cape	12	52
D	Van rooyen	М	Paarl Boys High	Western Cape	12	52
К	Waggie	F	Claremont High	Western Cape	12	52
RM	Makanani	М	Claremont High	Western Cape	12	52
А	Mckechnie	F	Protea Heights Academy	Western Cape	11	52
JV	Volker	М	Tableview High	Western Cape	11	52
Т	Samaai	М	South Peninsula High	Western Cape	12	52
LR	Trout naidoo	F	South Peninsula High	Western Cape	11	52
GS	Christians	F	Kimberley Girls High	Northern Cape	11	52
НО	Lawani	F	Kimberley Girls High	Northern Cape	11	52
CN	Christians	F	Kimberley Girls High	Northern Cape	12	52
СМ	Staines	F	Chisipite Senior	Zimbabwe	12	52
KD	Dirikisi	F	Chisipite Senior	Zimbabwe	11	52
TT	Myeza	М	Inkamana High	KwaZulu-Natal	11	52
С	Sim	F	Thomas More College	KwaZulu-Natal	12	52
S	Smith	F	Thomas More College	KwaZulu-Natal	12	52
D	Andrew	М	Werda	KwaZulu-Natal	12	52
LB	Matodzi	F	Patrick Ramaano Secondary	Limpopo	11	52
S	Nthulane	М	Thengwe High	Limpopo	12	52
N	Matodzi	F	Thengwe High	Limpopo	12	52
G	Makhado	F	Thengwe High	Limpopo	12	52
К	Kachere	М	Gateway High	Zimbabwe	12	52
Z	Nkohla	F	Bloemfontein South High	Free state	12	52
AP	Gwala	F	Lofentse Girls High	Gauteng	12	52
MR	Gare	F	Groenvlei Secondary	Limpopo	12	52
LC	Seanego	М	Groenvlei Secondary	Limpopo	12	52

Т	Kgatla	М	Mandela Barloworld	Limpopo	12	52
КМ	Matentshi	М	Moreko Secondary	Limpopo	12	52
М	Tshikungulu	F	Mbilwi Secondary	Limpopo	12	52
TG	Maluleke	М	Ntshuxeko High	Limpopo	12	52
Т	Shisali	М	Mountainview High	Limpopo	12	52
А	Mphaga	М	Tshivhase Secondary	Limpopo	12	52
V	Radzilani	М	Tshivhase Secondary	Limpopo	11	52
МО	Mulaudzi	М	Muthuhadini	Limpopo	11	52
Т	Moloi	М	Sunward Park	Gauteng	12	52
С	Johnston	М	Alberton High	Gauteng	12	52
FS	Butt	М	Azaadville Muslim	Gauteng	12	52
KL	Manyane	F	Charlotte Maxeke	Gauteng	12	52
NS	Dlamini	F	Hoerskool Diversity	Gauteng	10	52
С	Tsafandakis	F	ST Marys DSG	Gauteng	12	52
	Jansen Van	_			10	50
CL	Vuuren	F	ST Marys DSG	Gauteng	10	52
B	Twala	F	Vlakfontein	Gauteng	12	52
LT	Magudulela	F	WordsWorth High	Gauteng	11	52
ET	Raphasha	F	Pro Arte Alphen Park	Gauteng	12	52
DH	Hiralal	F	Mondeor High	Gauteng	11	52
TC	Palmer	F	Mondeor High	Gauteng	11	52
Х	De Klerk	F	Helpmekaar Kollege	Gauteng	12	52
Y	Higgins	F	Helpmekaar Kollege	Gauteng	12	52
А	Klynsmith	F	Helpmekaar Kollege	Gauteng	12	52
CN	Mohajane	F	Intuthuko Secondary	Mpumalanga	12	51
М	Manganye	F	Khamane secondary	Mpumalanga	12	51
BK	Pookgoa di	F	Pine Ridge Combined	Mpumalanga	12	51
Т	Mashilo	F	Zacheus Malaza Secondary	Mpumalanga	12	51
Н	Griessel	М	Afrikaanse Hoërskool Kroonstad	Free state	12	51
0	Mabale	М	Kroonstad CSS	Free state	12	51
К	Titus	F	Bloemfontein High	Free state	12	51
KP	Mathota	F	Ntemoseng Secondary	Free state	12	51
JH	Нау	М	Christiaan de wet	Free state	12	51
Р	Oosthuizen	М	Ladybrand Secondary	Free state	12	51
OF	Motlogi	F	Pinagare High	North West	12	51
KP	Ethusang	F	Pinagare High	North West	12	51
LL	Modiba	F	Tsogo Secondary	North West	12	51
А	Van den berg	F	Kismet Secondary	North West	11	51
А	Ramnath	М	Greytown Secondary	KwaZulu-Natal	12	51
S	Dlomo	М	Greytown Secondary	KwaZulu-Natal	12	51

ТС	Chen	М	Greytown Secondary	KwaZulu-Natal	12	51
AD	Budke	М	Martizburg College	KwaZulu-Natal	12	51
NN	Dladla	F	St Lewis Bertrand High	KwaZulu-Natal	12	51
S	Pillay	М	Star College Durban	KwaZulu-Natal	11	51
A	Sigonyela	F	Bisho High	Eastern Cape	12	51
CG	Dryden	М	Grey High	Eastern Cape	12	51
QZ	Matyaba	F	Holy Cross Education Centre	Eastern Cape	12	51
Н	Maqholo	М	Holy Cross High	Eastern Cape	11	51
YS	Nakasa	М	Holy Cross High	Eastern Cape	12	51
SD	Dumke	F	Lamplough Senior Secondary	Eastern Cape	12	51
N	Mfunquli	м	Lamplough Senior Secondary	Eastern Cape	12	51
N	Ntibane	М	Nyanga SSS	Eastern Cape	11	51
RL	Tuck	М	Pearson High	Eastern Cape	12	51
TP	Pengelly	F	Pearson High	Eastern Cape	12	51
L	Mathanjana	М	Richard Varha	Eastern Cape	12	51
М	Hewitt coleman	F	St Dominis Priory	Eastern Cape	10	51
NM	Holomisa	М	, Umtata High	Eastern Cape	11	51
MT	Islam	М	Umtata High	Eastern Cape	12	51
LL	Mngqi	F	Zwelivumile SSS	Eastern Cape	11	51
A	Van rhyn	F	Hugenote	Western Cape	12	51
то	Omalley	М	Paarl Boys High	Western Cape	12	51
NM	Mobbs	М	Claremont High	Western Cape	12	51
DD	Vorster	F	El Shaddai Christian School Christian	Western Cape	10	51
CS	Seaman	F	El Shaddai Christian School Christian	Western Cape	10	51
К	Engelbrecht	F	Hoerskool Vredendaal	Western Cape	12	51
AD	Dawood	F	Islamia College	Western Cape	12	51
IS	Sayed	F	Islamia College	Western Cape	11	51
N	Ismail	F	Islamia College	Western Cape	11	51
А	Volkwyn	М	Paul Roos Gymnasium	Western Cape	11	51
L	De beer	М	Paul Roos Gymnasium	Western Cape	11	51
JE	Le roux	М	Paul Roos Gymnasium	Western Cape	11	51
А	Larbi aissa	М	Star College Bridgetown	Western Cape	12	51
OK	Kgosieng	F	Kimberley Girls High	Northern Cape	12	51
T*	Hove	М	Watershed College	Zimbabwe	12	51
TG	Gamble	F	Chisipite Senior	Zimbabwe	12	51
VM	Mukome	F	Chisipite Senior	Zimbabwe	12	51
СМ	Malloch brown	F	Chisipite Senior	Zimbabwe	12	51
ТВ	Nharirire	F	Arundel	Zimbabwe	10	51
RJ	Mphahlele	F	Jane Furse Comprehensive	Limpopo	12	51

ML	Matamela	F	Patrick Ramaano Secondary	Limpopo	10	51
PS	Ndlovu	F	Ramogabudi Senior Secondary	Limpopo	11	51
U	Makhado	F	Thengwe High	Limpopo	12	51
E	Netshandama	F	Thengwe High	Limpopo	11	51
К	Khameli	F	Thohoyandu Secondary	Limpopo	12	51
А	Pike	F	Stirling High	Eastern Cape	10	51
А	Mokoena	М	Shanke Senior	Mpumalanga	12	51
М	Lepelle	F	Thomas Nhlabathi	Mpumalanga	12	51
KS	Ntuli	F	Thomas Nhlabathi	Mpumalanga	11	51
NJ	Modise	F	Mohaladitwe	Free state	12	51
ME	Mokgobu	F	Malusi High	Limpopo	11	51
MT	Tema	F	Bedfordview High	Gauteng	11	51
LP	Malo ma	М	Mapetla High	Gauteng	11	51
ML	Khoza	F	Capricorn High	Limpopo	11	51
SE	Hossain	F	Dendron Secondary	Limpopo	11	51
RN	Mosue	М	Groenvlei Secondary	Limpopo	12	51
К	Sekgobela	F	Leap Science and Maths	Limpopo	12	51
KV	Kgowa	F	Mammoka Secondary	Limpopo	12	51
U	Badana	М	Mbilwi Secondary	Limpopo	12	51
BG	Nchabeleng	М	Moreko Secondary	Limpopo	12	51
М	Murendi	F	Mbilwi Secondary	Limpopo	11	51
Т	Singo	F	Mbilwi Secondary	Limpopo	12	51
А	Nemusunda	М	Patrick Ramaano	Limpopo	12	51
LC	Kanyane	М	Ramatshagalala	Limpopo	11	51
К	Malefahlo	F	Ramatshagalala	Limpopo	12	51
MM	Mabitla	М	Nakwadi Secondary	Limpopo	12	51
FS	Lesufi	М	Mphela A Marumo	Limpopo	12	51
KD	Matseba	F	Mphela A Marumo	Limpopo	12	51
L	Ratshihule	F	Tshivhase Secondary	Limpopo	12	51
ТМ	Phaahla	М	ST Marks College	Limpopo	12	51
NM	Sebati	F	Taxila Secondary	Limpopo	11	51
GM	Pitjeng	М	Taxila Secondary	Limpopo	11	51
С	Venter	F	Afrikaanse Hoër Meisieskool	Gauteng	12	51
NM	Sindephi	F	Charlotte Maxeke	Gauteng	12	51
Т	Ramothwala	F	ST Martin Deppores	Gauteng	12	51
Ν	De jager	F	ST Marys DSG	Gauteng	11	51
I	Pretorius	F	ST Marys DSG	Gauteng	11	51
LB	Segapo	F	Trinity House Littlefalls	Gauteng	11	51
D	Van der Merwe	М	Trinity House Littlefalls	Gauteng	11	51
КМ	Moalusi	М	Trinity House Littlefalls	Gauteng	12	51

GS	Rees	F	Veritas College	Gauteng	11	51
MY	Wadee	М	Lenasia Muslim	Gauteng	10	51
Т	Khan	F	Lenasia Muslim	Gauteng	12	51
Т	Cassim	М	Lenasia Muslim	Gauteng	11	51
BA	Phera	F	Seana Marena	Gauteng	12	51
VF	Ntembe	М	Phakamani Secondary	Gauteng	12	51
D	Mantcheva	F	Pro Arte Alphen Park	Gauteng	12	51
В	Govender	F	Redhill	Gauteng	11	51
SN	Nhlengethwa	М	Mondeor High	Gauteng	11	51
Т	Adams	М	Simons Town School	Western Cape	11	51
MT	Ntuli	F	Greendale	Mpumalanga	12	50
NS	Mahl ngu	F	Intuthuko Secondary	Mpumalanga	12	50
NS	Shabangu	F	Lihawu Senior Secondary	Mpumalanga	10	50
SP	Mavecua	F	Phillip Ndimande Secondary	Mpumalanga	11	50
ТМ	Ngomane	М	Sibukosetfu secondary	Mpumalanga	12	50
PL	Mfene	F	Zacheus Malaza Secondary	Mpumalanga	12	50
S	James	F	Uplands College	Mpumalanga	12	50
ТВ	Makwela	М	Ziphakamiseni Secondary	Mpumalanga	12	50
J	Van biljon	F	Afrikaanse Hoërskool Kroonstad	Free State	12	50
NN	Ntjiyo	F	Mariasdal HIGH	Free State	12	50
LQ	Qcowa	F	Atlehang Secondary	Free State	12	50
Т	Letsoela	F	Bloemfontein High	Free State	12	50
MC	Davidson	F	Oranje Meisieskool	Free State	12	50
Т	Setlolela	F	Christiaan de wet	Free State	12	50
Т	Motlhabane	М	Tlotlanang Combined	Free State	12	50
Т	Tseka	М	Navalsig High	Free State	12	50
S	Molato	М	Taiwe Secondary	Free State	12	50
К	Rakometsi	F	Teto high school	Free State	12	50
S	Zwa ne	М	Kgolathuto	Free State	12	50
JB	Bhayat	F	Al Huda Muslim	North West	10	50
KR	Kuduntwane	М	Pinagare High	North West	12	50
G	Grand	М	Pinagare High	North West	11	50
BB	Moleofanene	М	Sol Plaatje Secondary	North West	12	50
HD	Murray	F	Epworth High	KwaZulu-Natal	12	50
AN	Simelane	F	Ingwavuma High	KwaZulu-Natal	12	50
К	Chetty	М	Maritzburg College	KwaZulu-Natal	12	50
М	Badat	М	Maritzburg College	KwaZulu-Natal	12	50
А	Abdool	М	Maritzburg College	KwaZulu-Natal	12	50
UM	Zuma	М	Maritzburg College	KwaZulu-Natal	12	50
LC	Tatana	М	Pinetown Boys High	KwaZulu-Natal	12	50

SC	Moonasar	F	Star College Durban	KwaZulu-Natal	12	50
Н	Lesufi	F	Crawford La Lucia	KwaZulu-Natal	11	50
U	Govind	M	Crawford La Lucia	KwaZulu-Natal	12	50
SR	Rajnarain	м	Crawford La Lucia	KwaZulu-Natal	12	50
M	Harkness	F	Crawford La Lucia	KwaZulu-Natal	10	50
NW	Sieberhagen	M	Grey High	Eastern Cape	11	50
YM	Mpetsheni	M	Holy Cross Education Centre	Eastern Cape	12	50
KG	Gojo	M	Lamplough Senior Secondary	Eastern Cape	12	50
SM	Moosa	F	Nasruddin Islamic High	Eastern Cape	10	50
A	Verson	м	Pearson High	Eastern Cape	12	50
JA	Pote	F	Pearson High	Eastern Cape	12	50
DC	Faria	F	St Domonics Priory	Eastern Cape	12	50
J	Ackermann	F	St Domonics Priory	Eastern Cape	11	50
EM	Makabane	F	St Johns College	Eastern Cape	12	50
S	Ntshewula	М	St Johns College	Eastern Cape	12	50
L	De coning	М	Stirling High	Eastern Cape	12	50
RU	Pillay	М	Stirling High	Eastern Cape	11	50
KK	Dukada	F	Umtata High	Eastern Cape	12	50
MY	Nokele	F	Umtata High	Eastern Cape	12	50
DO	Ogle	М	Umtata High	Eastern Cape	11	50
KI	Imrie	F	Union High	Eastern Cape	11	50
S	Mvani	м	Oaklands High	Western Cape	12	50
А	Benjamin	М	Claremont High	Western Cape	12	50
AF	Fisher	F	Claremont High	Western Cape	12	50
LM	Lombard	F	HMS La Rochelle GHS	Western Cape	12	50
MI	Noorgat	М	Islamia College	Western Cape	12	50
Z	Jaffer	М	Islamia College	Western Cape	12	50
Y	Maritzz	F	Langenhoven Gimnasium	Western Cape	11	50
ON	Nienaber	М	Paul Roos Gymnasium	Western Cape	11	50
В	Dutoit	М	Paul Roos Gymnasium	Western Cape	11	50
Z	Waggie	F	South Peninsula High	Western Cape	12	50
Y	Tregonning	F	South Peninsula High	Western Cape	12	50
AK	Lowe	М	South Peninsula High	Western Cape	12	50
VA	Mamvuto	F	Watershed College	Zimbabwe	12	50
СМ	Muvindi	F	Chisipite Senior	Zimbabwe	12	50
FM	Maseko	F	Chisipite Senior	Zimbabwe	12	50
NJ	Binneman	М	Privaatskool Elnatan	Namibia	12	50
KA	Dlamini	М	Inkamana High	KwaZulu-Natal	12	50
S	Esterhuyse	F	Thomas More College	KwaZulu-Natal	12	50
LL	Lee	F	Thomas More College	KwaZulu-Natal	11	50

М	Matiela		Guardian Angels	Limpopo		50
MM	Mkhari	М	Nghonyama High	Limpopo	12	50
0	Sinyela	М	Thengwe High	Limpopo	12	50
0	Nyadzhiwa	М	Thengwe High	Limpopo	12	50
NE	Jim	F	Butterworth High	Eastern Cape	12	50
I	Ndenze	F	Butterworth High	Eastern Cape	12	50
Y	Mbobela	F	Cameron Ngudle	Eastern Cape	11	50
SP	Sakent	F	Ugie High	Eastern Cape	11	50
AS	Phakathi	F	Thomas Nhlabathi	Mpumalanga	12	50
ZK	Mahlangu	F	Thomas Nhlabathi	Mpumalanga	11	50
TD	Morata	F	Matladi Project	Limpopo	12	50
К	Mushi	М	Mahoa High	Limpopo	12	50
К	Motlhoding	F	Malusi High	Limpopo	12	50
М	Machaba	М	Dendron Secondary	Limpopo	11	50
LM	Monyemangena	F	Dendron Secondary	Limpopo	11	50
CQ	Lekoloane	М	Dendron Secondary	Limpopo	12	50
MI	Bwerinofa	F	Hudson Ntsanwisi SSS	Limpopo	12	50
NP	Maluleka	F	Leap Science and Maths	Limpopo	11	50
MB	Moshoana	F	Leap Science and Maths	Limpopo	11	50
Р	Maile	F	Leap Science and Maths	Limpopo	11	50
HP	Matjeke	F	Mammoka Secondary	Limpopo	12	50
A	Lavhelani	М	Mbilwi Secondary	Limpopo	12	50
М	Mahlahlane	М	Mmantutule	Limpopo	12	50
R	Mamoepa	F	Moreko Secondary	Limpopo	12	50
Р	Dzalagome	F	Mbilwi Secondary	Limpopo	12	50
L	Monareng	М	Risinga High	Limpopo	12	50
D	Thobejane	F	Serokolo	Limpopo	12	50
ON	Mamashela	F	Taxila Secondary	Limpopo	12	50
L	Banda	F	Sunward Park	Gauteng	12	50
JD	Abrams	М	Sunward Park	Gauteng	11	50
Т	Joffe	F	Abbotts College Centurion	Gauteng	12	50
А	Ebrahim	F	Ameerak Montessori	Gauteng	10	50
S	Harrar	F	Azaadville Muslim	Gauteng	12	50
S	Prusent	М	Bhukulani Secondary	Gauteng	12	50
TV	Puwai	F	Hoerskool Birchleigh	Gauteng	12	50
SA	Shahbaz	F	Bracken High	Gauteng	11	50
DH	Nare	М	Charlotte Maxeke	Gauteng	12	50
AS	Mona	F	Curtis Nkondo SOS	Gauteng	11	50
LL	Nhaposse	F	Curtis Nkondo SOS	Gauteng	11	50
NI	Мауери	F	Curtis Nkondo SOS	Gauteng	12	50

N	Nkiwane	М	Diepsloot Secondary Gauteng		11	50
К	Modisane	F	Edward Phatudi Gauteng		10	50
SM	Kikonde	F	Hoerskool Diversity	Gauteng	11	50
PM	Muleya	М	Institute Status Acres	Gauteng	12	50
JB	Britton	F	ST Marys DSG	Gauteng	12	50
DK	Kurten	М	Trinity House Littlefalls	Gauteng	11	50
N	Wahab	М	Lenasia Muslim School	Gauteng	12	50
AN	Khumalo	F	ST Dunstans College	Gauteng	12	50
NJ	Mathebula	F	Orlando Secondary	Gauteng	12	50
К	Mantcheva	F	Pro Arte Alphen Park	Gauteng	12	50
NK	Funde	F	Mondeor High	Gauteng	11	50



## Natural Sciences Grade 7-9

Initials	Surname	Gender	Grade	School name	Province	Total
SM	Mtsweni	М	9	Zacheus Malaza MSTA	Mpumalanga	84
TW	Nkwanyana	М	9	Zacheus Malaza MSTA	Mpumalanga	83
А	Kaur	F	9	Model Private	Eastern Cape	83
SN	Maseko	F	9	Zacheus Malaza MSTA	Mpumalanga	81
S	Nkosi	F	9	Zacheus Malaza MSTA	Mpumalanga	81
М	Choma	F	9	Zacheus Malaza MSTA	Mpumalanga	81
RN	Naidoo	М	9	Star College High Durban	KwaZulu-Natal	81
PS	Makua	F	9	Zacheus Malaza MSTA	Mpumalanga	80
L	Thomo	F	9	Zacheus Malaza MSTA	Mpumalanga	80
AS	Qezu	F	9	Model Private	Eastern Cape	80
А	Bester	М	8	Pretoria Boys High	Gauteng	80
NM	Mlangeni	F	9	Zacheus Malaza MSTA	Mpumalanga	79
NM	Mavuso	F	9	Zacheus Malaza MSTA	Mpumalanga	79
LL	Madayile	М	9	Model Private	Eastern Cape	79
BB	Masombuka	F	9	Zacheus Malaza MSTA	Mpumalanga	78
MN	Moloko	F	9	Zacheus Malaza MSTA	Mpumalanga	78
LB	Malatji	М	9	Zacheus Malaza MSTA	Mpumalanga	78
КМ	Phasha	F	9	Zacheus Malaza MSTA	Mpumalanga	78
AP	Nkosi	F	9	Zacheus Malaza MSTA	Mpumalanga	78
BP	Sibiya	F	9	Zacheus Malaza MSTA	Mpumalanga	77
NI	Hermans	F	9	Zacheus Malaza MSTA	Mpumalanga	77
SS	Singh	М	9	Star College High Durban	KwaZulu-Natal	77
AB	Siziba	F	7	Model Private	Eastern Cape	77
BL	Qusheka	F	8	Model Private	Eastern Cape	77
IN	Nxitywa	F	8	Model Private	Eastern Cape	77
GB	Bouwer	F	9	El Shaddai Christian School Christian	Western Cape	77
CJ	Lochner	М	9	Paul Roos Gymnasium	Western Cape	77
NM	Majozi	М	9	Courtney International	Gauteng	76
SC	Makola	F	9	Zacheus Malaza MSTA	Mpumalanga	76
AK	Macicane	F	9	Zacheus Malaza MSTA	Mpumalanga	76
SW	Mahlangu	F	9	Zacheus Malaza MSTA	Mpumalanga	76
Т	Maredi	F	9	Zacheus Malaza MSTA	Mpumalanga	76
NP	Mahlangu	F	9	Zacheus Malaza MSTA	Mpumalanga	76
SG	Govender	М	9	Star College High Durban	KwaZulu-Natal	76
CS	Steenkamp	М	9	Thomas More College	KwaZulu-Natal	76

						1
LA	Ngoyi	M	9	Model Private	Eastern Cape	76
JC	De jonge	М	9	Hugenote Hoerskool	Western Cape	76
CV	Vanrheede	М	9	Protea Heights Academy	Western Cape	76
SC	Chatterjee	М	9	Courtney International	Gauteng	75
S	Sithole	F	9	Zacheus Malaza MSTA	Mpumalanga	75
SN	Shabangu	М	9	Zacheus Malaza MSTA	Mpumalanga	75
LK	Mbiza	F	9	Zacheus Malaza MSTA	Mpumalanga	75
SM	Malapane	М		Zacheus Malaza MSTA	Mpumalanga	75
LD	Mgedezi	F	7	Model Private	Eastern Cape	75
Н	Menzani	F	9	Model Private	Eastern Cape	75
IJ	Jombile	М	9	Model Private	Eastern Cape	75
MW	Welsford	М	9	El Shaddai Christian School Christian	Western Cape	75
AG	Gebremichael	F	9	El Shaddai Christian School Christian	Western Cape	75
DP	Nelson	М	8	Benoni High	Gauteng	74
JA	Marais	М	9	Pretoria Boys High	Gauteng	74
KC	Mokome	F	9	Zacheus Malaza MSTA	Mpumalanga	74
S	Theledi	F	9	Zacheus Malaza MSTA	Mpumalanga	74
L	Mlityalwa	F	9	Model Private	Eastern Cape	74
OT	Tuswa	F	9	Model Private	Eastern Cape	74
LE	Brown	F	9	Benoni High	Gauteng	73
LG	Vilakazi	F	9	Zacheus Malaza MSTA	Mpumalanga	73
MM	Nkosi	М	9	Zacheus Malaza MSTA	Mpumalanga	73
Р	Nape	F	9	Leap Science and Maths	Limpopo	73
PP	Rhawuzela	F	7	Model Private	Eastern Cape	73
Т	Mhambi	F	9	Model Private	Eastern Cape	73
JC	Coetzee	F	9	Hermanus High	Western Cape	73
JN	Smit	М	9	Hoerskool Paarl Gimnasium	Western Cape	73
JM	Mulder	М	9	Paul Roos Gymnasium	Western Cape	73
BS	Hlatshwayo	F	9	Zacheus Malaza MSTA	Mpumalanga	72
N	Mathedimosa	F	7	Maokeng Primary	Limpopo	72
MK	Chaukee	F	7	Maokeng Primary	Limpopo	72
MZ	Fakier	М	9	Al falaah college	KwaZulu-Natal	72
TD	Dalasa	М	8	Model Private	Eastern Cape	72
QZ	Gwadiso	F	9	Model Private	Eastern Cape	72
SP	Gosani	F	7	Mbekweni Primary	Western Cape	72
AA	Vollgraaff	М	9	Hoerskool Bellville	Western Cape	72
JJ	Jacobs	М	9	Paul Roos Gymnasium	Western Cape	72
JH	Herbst	М	9	Protea Heights Academy	Western Cape	72
HL	Luna	M	9	Courtney International	Gauteng	71

SC	Gatjeni	F	9	Zacheus Malaza MSTA	Mpumalanga	71
KV	Potoo	М	7	Maokeng Primary	Limpopo	71
Ν	Hlonwaane	F	7	Maokeng Primary	Limpopo	71
PL	Sebolai	F	7	Maokeng Primary	Limpopo	71
KB	Mashembye	М	7	Maokeng Primary	Limpopo	71
KL	Lerutla	М	9	Leap Science and Maths	Limpopo	71
Y	Osman	М	9	Al falaah colledge	KwaZulu-Natal	71
JO	Ojugbele	М	9	Star College High Durban	KwaZulu-Natal	71
L	Sasa	М	7	Mbekweni Primary	Western Cape	71
Z	Dodo	F	7	Mbekweni Primary	Western Cape	71
К	Jansen van vuuren	F	9	Hermanus	Western Cape	71
LH	Hanekom	F	9	Lydenburg Hoerskool	Mpumalanga	71
GL	Luies	М	9	Hoerskool Jeugland	Gauteng	70
ZC	Mkhabela	М	9	Zacheus Malaza MSTA	Mpumalanga	70
NP	Molefe	F	9	Zacheus Malaza MSTA	Mpumalanga	70
LL	Kgatla	F	7	Maokeng Primary	Limpopo	70
KJ	Nku	F	7	Maokeng Primary	Limpopo	70
SM	Mothemane	М	7	Maokeng Primary	Limpopo	70
GL	Ofentse	F	7	Maokeng Primary	Limpopo	70
NU	Ulassi	М	9	Star College High Durban	KwaZulu-Natal	70
MD	Arnott	М	7	Rondebosch Boys Preparatory	Western Cape	70
ΤZ	Simpson	М	9	Vista Nova	Western Cape	70
GS	Swartz	М	9	Northern Cape High	Northern Cape	70
А	Herselman	F	9	Lydenburg Hoerskool	Mpumalanga	70
EC	Кдото	М	7	Mohlakeng Combined	Limpopo	70
LB	Morune	F	9	Mohlakeng Combined	Limpopo	70
С	Vanzyl	F	8	Jeugland	Gauteng	69
DR	Ruthenberg	М	9	Jeugland	Gauteng	69
QH	Qupe	М	9	Star College Pretoria	Gauteng	69
RM	Rampedi	F	9	Zacheus Malaza MSTA	Mpumalanga	69
MK	Maema	М	9	Dendron Secondary	Limpopo	69
Н	Haffejee	F	9	Al falaah college	KwaZulu-Natal	69
HJ	Joosub	М	9	Star College Durban	KwaZulu-Natal	69
А	Somtsewu	F	8	Model Private	Eastern Cape	69
NA	Моуо	F	8	Model Private	Eastern Cape	69
Н	Visser	М	9	Hoerskool Bellville	Western Cape	69
SJ	Chemaly	М	9	Paul Roos Gymnasium	Western Cape	69
DD	Dugmore	М	9	Paul Roos Gymnasium	Western Cape	69
В	Vanddijk	М	9	Protea heights Academy	Western Cape	69
MT	Alli	М	9	Star College Bridgetown	Western Cape	69

СТ	Tarr	F	9	Tableview High	Western Cape	69
A	Lachporia	F	9	Lenasia Muslim School	Gauteng	68
BN	Khumalo	F	9	Zacheus Malaza MSTA	Mpumalanga	68
N*	Moahlodi	F	7	Maokeng Primary	Limpopo	68
OS	Selokela	М	7	Maokeng Primary	Limpopo	68
LN	Baloyi	F	7	Maokeng Primary	Limpopo	68
DM	Motileni	F	7	Maokeng Primary	Limpopo	68
ММ	Maluse	F	7	Maokeng Primary	Limpopo	68
ML	Motshegoa	F	7	Maokeng Primary	Limpopo	68
TJ	Chetty	F	9	Star College Girls High	KwaZulu-Natal	68
SG	Govender	М	9	Star College High Durban	KwaZulu-Natal	68
UM	Mlityalwa	F	8	Model Private	Eastern Cape	68
LM	Mkupa	F	8	Model Private	Eastern Cape	68
S	Kaswa	М	8	Stirling High	Eastern Cape	68
L	Guntsu	М	9	Model Private	Eastern Cape	68
BS	Clark	F	9	Stirling High	Eastern Cape	68
ТВ	Bukhari	М	9	Islamia College	Western Cape	68
BN	Vilane	М	9	Zimele Secondary	KwaZulu-Natal	68
SA	Mabasa	М	9	Mahlahle Combined Independent	Limpopo	68
КJ	Motonya	F	9	Mohlakeng Combined	Limpopo	68
0	Dahl	М	9	German School	Western cape	68
ТР	Patel	F	9	Lenasia Muslim School	Gauteng	67
К	Krishna	М	9	Redhill School	Gauteng	67
F	Hlakole	F	9	Zacheus Malaza MSTA	Mpumalanga	67
KP	Nkuna	М	7	Maokeng Primary	Limpopo	67
ST	Thomas	М	9	Capricorn highs chool	Limpopo	67
Ν	Mzila	F	7	Keates Drift Primary	KwaZulu-Natal	67
М	Kajee	М	9	Alfalaah College	KwaZulu-Natal	67
PF	Silenge	М	9	Pinetown Boys High	KwaZulu-Natal	67
SG	Gilikidla	F	9	Model Private	Eastern Cape	67
PD	Du plessis	М	7	Rondebosch Boys Preparatory	Western Cape	67
L	Badenhorst	F	8	Protea Heights Academy	Western Cape	67
MS	Perkel	F	9	Herzlia High school	Western Cape	67
MA	Cloete	М	9	Hoerskool Bellville	Western Cape	67
CE	De wet	М	9	Hoerskool Bonnievale	Western Cape	67
F	Malherbe	М	9	Paul Roos Gymnasium	Western Cape	67
ММ	Da costa	М	9	Star College Bridgetown	Western Cape	67
MA	Mohammed	М	9	Liverpool Secondary	Gauteng	67
К	Taljaard	М	9	Pretoria Boys High	Gauteng	67

MS	Kgatla	F	8	Mafolofolo High School	Limpopo	67
ΗН	Haffejee	F	8	Lenasia Muslim School	Gauteng	66
Т	Quissimuco	F	7	Moruti Makusa Primary	Mpumalanga	66
М	M atsie	F	7	Moruti Makusa Primary	Mpumalanga	66
RD	Sihlangu	F	9	Zacheus Malaza MSTA	Mpumalanga	66
PP	Molekwa	F	7	Maokeng Primary	Limpopo	66
SL	Langa	М	9	Leap Science and Maths	Limpopo	66
HA	Mangwani	М	9	Nyukani Education Centre	Limpopo	66
SC	Chetty	F	8	Star College Durban	KwaZulu-Natal	66
А	Ali	F	9	Al falaah college	KwaZulu-Natal	66
NT	Dlamini	F	7	Model Private	Eastern Cape	66
ΗК	Kasiravu	F	8	Model Private	Eastern Cape	66
СМ	Marx	F	8	Stirling High	Eastern Cape	66
MM	Miah	М	9	Stirling High	Eastern Cape	66
D	Adler	М	7	Laerskool Jan van Riebeeck	Western Cape	66
А	Oggies	М	7	Mbekweni Primary	Western Cape	66
LE	Vergottinnii	F	8	Hugenote hoerskool	Western Cape	66
CE	Linnegar	М	9	Hugenote Hoerskool	Western Cape	66
ТМ	Mullineux	М	9	Paul Roos Gymnasium	Western Cape	66
Z	Van onselen	М	9	Paul Roos Gymnasium	Western Cape	66
AK	Kunnath	М	9	Northern Cape High	Northern Cape	66
UC	Izunwa	F	7	SA College Private	Gauteng	65
J	Espach	М	8	Hoerskool Jeugland	Gauteng	65
S	Thatelo	F	9	Acudeo college	Gauteng	65
SM	Mohan	М	9	Horizon High	Gauteng	65
TD	King	М	9	Horizon High	Gauteng	65
RO	Olivier	М	9	Redhill School	Gauteng	65
R	Van niekerk	М	9	St Dunstans College	Gauteng	65
S	Magolego	F	7	Moruti Makusa Primary	Mpumalanga	65
Т	Ndlovu	М	7	Moruti Makusa Primary	Mpumalanga	65
BC	Chili	М	8	Star College High Durban	KwaZulu-Natal	65
MD	Dhunpath	М	8	Star College Durban	KwaZulu-Natal	65
IV	Vahed	М	8	Star College High Durban	KwaZulu-Natal	65
SS	Subbiah	М	8	Werda High	KwaZulu-Natal	65
Ρ	Ngubo	М	9	Mandla Mthethwa	KwaZulu-Natal	65
DN	Naidu	М	9	Star College Durban	KwaZulu-Natal	65
V	Panday	М	9	Star College High Durban	KwaZulu-Natal	65
JA	Le grange	М	9	Werda High	KwaZulu-Natal	65
E	Kruger	F	8	Stirling High	Eastern Cape	65
JS	Schlesinger	М	7	Rondebosch Boys Preparatory	Western Cape	65

D	Klette	М	7	Rondebosch Boys Preparatory	Western Cape	65
U	Nyirenda	F	9	Protea Heights Academy	Western Cape	65
SH	Hillier	М	9	Protea Heights Academy	Western Cape	65
ZM	Macke nzie	М	9	Star College Bridgetown	Western Cape	65
Z	Laher	F	9	Benoni High	Gauteng	65
MD	Mojela	М	8	Mafasa High School	Limpopo	65
AR	Rajpurohit	М	8	Alma Mater International	Gauteng	64
Т	Lukhele	F	9	Curtisnkondosos	Gauteng	64
OC	Dube	М	9	Horizon High	Gauteng	64
PN	Ncokazi	М	9	Star College Pretoria	Gauteng	64
LD	Den	М	9	Star College Pretoria	Gauteng	64
Ν	Ngwendo	F	7	Moruti Makusa Primary	Mpumalanga	64
L	Maredi	М	7	Moruti Makusa Primary	Mpumalanga	64
К	Sibany oni	М	7	Moruti Makusa Primary	Mpumalanga	64
Ν	Gama	F	7	Ncotshane	KwaZulu-Natal	64
AH	Hoosen	М	7	Star College Primary	KwaZulu-Natal	64
ZS	Deolall	F	8	Star College Girls High	KwaZulu-Natal	64
В	Habib	F	9	Al Falaah College	KwaZulu-Natal	64
DO	Pillai	М	9	Avonford Secondary	KwaZulu-Natal	64
DB	Bhagwan	F	9	Star College Durban	KwaZulu-Natal	64
М	Kadwa	М	9	Star College Durban	KwaZulu-Natal	64
ZM	Matthee	F	9	Star College Durban	KwaZulu-Natal	64
UA	Adam	М	9	Star College Durban	KwaZulu-Natal	64
NM	Mngini	F	8	Model Private	Eastern Cape	64
А	Madyibi	F	8	Model Private	Eastern Cape	64
MD	Basson	М	9	Union High	Eastern Cape	64
ET	Toerien	М	7	Rondebosch Boys Preparatory	Western Cape	64
JV	Visser	М	9	Pretoria Boys High	Gauteng	64
MD	Rwodzii	F	8	Benoni High	Gauteng	63
А	Sreekumar	М	9	Benoni High	Gauteng	63
JF	Fakey	F	9	Courtney International	Gauteng	63
ΗV	Hulley	F	9	Redhill School	Gauteng	63
ТМ	Tovhakale	F	9	SA College Private	Gauteng	63
KC	Maseko	М	9	Star College Pretoria	Gauteng	63
SS	Singh	F	9	St Marys DSG	Gauteng	63
Ν	Makuse	М	7	Moruti Makusa Primary	Mpumalanga	63
V	Matsane	F	7	Moruti Makusa Primary	Mpumalanga	63
DL	Maredi	F	8	Molapalama	Mpumalanga	63
R	Khakhu	М	8	Thengwe High	Limpopo	63
SB	Mpofu	F	7	Phumelelani	KwaZulu-Natal	63

А	Shezi	F	7	Pomeroy cp	KwaZulu-Natal	63
MG	Govender	F	9	Star College Durban	KwaZulu-Natal	63
SR	Ramnath	M	9	Star College Durban	KwaZulu-Natal	63
JT	Govender	M	9	Star College High Durban	KwaZulu-Natal	63
LS	Beliwe	F	8	Model Private	Eastern Cape	63
P	Ramncwana	F	7	Mbekweni Primary	Western Cape	63
г CS	Mabvunda	F	7	Mbekweni Primary	-	63
Z		M	7	•	Western Cape	63
	Jantjies		_	Mbekweni Primary	Western Cape	
N	Khan Hoosain	F	8	Islamia College	Western Cape	63
JA		M	8	Protea Heights Academy	Western Cape	63
A	Dippenaar	F	9	Hoerskool Bellville	Western Cape	63
MM	Kretschmer	F	9	Hoerskool Bellville	Western Cape	63
L	Hoogenboezem	F	9	Hoerskool strand	Western Cape	63
L	Botha	F	9	Hoerskool Paarl Gimnasium	Western Cape	63
JA	Henderson	F	9	Hermanus	Western Cape	63
TS	Strydom	M	9	Protea heights academy	Western Cape	63
Ν	De villiers	F	9	Protea heights Academy	Western Cape	63
С	Balie	F	9	Rocklands High	Western Cape	63
RO	Omarjee	F	9	Star College Cape Town	Western Cape	63
TS	Sulliman	F	9	Star College Cape Town	Western Cape	63
TL	Sifuba	М	9	Somerset West Private School	Western Cape	63
Ν	Geldenhuys	М	9	Adamantia	Northern Cape	63
ML	Laher	М	9	Benoni High	Gauteng	63
А	Van der merwe	F	9	Noordheuwel	Gauteng	63
R	Madiope	М	7	Mohlakeng Combined	Limpopo	63
PW	Esterhuizen	М	9	Privaatskool Moria	Namibia	63
CW	Webb	М	7	Farrarmere Primary	Gauteng	62
HA	Amod	М	8	Lenasia Muslim School	Gauteng	62
К	Mthambeka	F	9	Acudeo College	Gauteng	62
N	Tshikondela	М	9	Pretoria Technical High	Gauteng	62
NN	Tladi	F	9	SA College Private	Gauteng	62
G	Moloto	М	7	Nelson Ngubeni Primary	Mpumalanga	62
UK	Mahlangu	F	8	Generaal Hertzog	Mpumalanga	62
A	Kutama	M	9	Mbilwi High	Limpopo	62
PM	Makhubela	М	9	Sunriseview Secondary	North West	62
S	Mntungwa	M	7	Mbondweni	KwaZulu-Natal	62
AA	Njoko	F	7	Phumelelani	KwaZulu-Natal	62
A	Ndlovu	 F	8	Mfongosi school	KwaZulu-Natal	62
DN	Narsee	M	8	Star College Durban	KwaZulu-Natal	62
NN	Mnguni	M	8	Star College Durban	KwaZulu-Natal	62

	Dever	NA	0		K	12
PR	Ramsaroop	M	8	Star College High Durban	KwaZulu-Natal	62
JT	Nagiah	M	9	Star College Durban	KwaZulu-Natal	62
KC	Chetty	F	9	Star College Girls High	KwaZulu-Natal	62
AS	Sonwabe	М	9	Star College High Durban	KwaZulu-Natal	62
SA	Somdaka	F	7	Mbekweni Primary	Western Cape	62
GS	Darius	F	8	Somerset West Private	Western Cape	62
WH	Wang	М	8	Somerset West Private	Western Cape	62
L	Muller	М	9	Hoerskool Paarl Gimnasium	Western Cape	62
CJ	Botha	М	9	Hoerskool Paarl Gimnasium	Western Cape	62
JD	Derby	М	9	Hermanus	Western Cape	62
М	Willmore	М	9	Paul Roos Gymnasium	Western Cape	62
RJ	Henry	М	9	Protea heights academy	Western Cape	62
AL	Malambo	F	9	Protea heights academy	Western Cape	62
YS	Samsodien	М	9	Protea heights Academy	Western Cape	62
CD	Delport	F	9	Protea heights Academy	Western Cape	62
D	Stipp	М	9	Protea heights Academy	Western Cape	62
R	Snyman	М	9	Hoerskool Hartswater	Northern Cape	62
N	Mpumelelo	М	9	Inkamana High School	KwaZulu-Natal	62
L	Makhanya	F	9	Inkamana High School	KwaZulu-Natal	62
J	Phiri	М	9	Acudeo college	Gauteng	61
TJ	De wee	М	9	Hoerskool Hartswater	Gauteng	61
RL	Lorgat	F	9	Lenasia Muslim School	Gauteng	61
SA	Abraham	F	9	Redhill School	Gauteng	61
ES	Ngwetjana	М	9	Capricorn High School	Limpopo	61
ОМ	Moanakoena	М	9	Capricorn High School	Limpopo	61
PP	Singo	М	9	Mbilwi High	Limpopo	61
RT	Rakhivhani	м	9	St. Augustine Residential School	Limpopo	61
KV	Janse van Rensburg	М	8	Bergsig Academy	North West	61
MS	Saidoo	М	9	Bergsig Academy	North West	61
К	Ndawonde	F	7	Mbondweni	KwaZulu-Natal	61
SZ	Mazibuko	F	7	Phumelelani	KwaZulu-Natal	61
ML	Dlamini	М	7	Phumelelani	KwaZulu-Natal	61
SN	Mthembu	F	7	Phumelelani	KwaZulu-Natal	61
SV	Govender	М	7	Star College Primary	KwaZulu-Natal	61
MA	Abba omar	М	8	Star College Durban	KwaZulu-Natal	61
U	Sarkhot	М	9	Al Falaah College	KwaZulu-Natal	61
A	Ally	М	9	Al Falaah College	KwaZulu-Natal	61
LT	Mathole	М	9	Mfongosi School	KwaZulu-Natal	61
RS	Sookraj	М	9	Star College Durban	KwaZulu-Natal	61

MR	Ramdeen	F	9	Star College Girls High	KwaZulu-Natal	61
A	Mpongo	F	7	Model Private	Eastern Cape	61
NM	Morkel	М	7	Montgomerymiller	Eastern Cape	61
LG	Strooberg	F	9	Pearson High	Eastern Cape	61
JH	Harebottle	М	9	Stirling High	Eastern Cape	61
L	Tukani	F	7	Mbekweni Primary	Western Cape	61
IH	Hans	М	8	Star college Bridgetown	Western Cape	61
А	Vanwyk	F	9	Hoerskool Paarl Gimnasium	Western Cape	61
BA	Aysen	М	9	Protea heights Academy	Western Cape	61
RP	Pieterse	М	9	Riebeeckrand Hoerskool	Gauteng	61
М	Shitholani	М	8	Mahlahle Combined Independent	Limpopo	61
DS	Luescher	F	9	German School	Western cape	61
Ν	Manana	F	8	Acudeo college	Gauteng	60
ТМ	Morolong	М	8	Curtisnkondosos	Gauteng	60
RJ	Jones	М	8	Star College Pretoria	Gauteng	60
AL	Motileng	М	8	Star College Pretoria	Gauteng	60
М	Hoosen	F	9	Benoni hg h school	Gauteng	60
RN	Mvubu	F	9	Destiny Academy	Gauteng	60
NR	Nagel	F	9	Hts John vorster	Gauteng	60
AL	Loonat	F	9	Jeppe Girls	Gauteng	60
KM	Serothoane	F	9	Pretoria Technical High	Gauteng	60
JR	Naidoo	М	9	Star College Pretoria	Gauteng	60
	Mudaca	F	7	Moruti Makusa Primary	Mpumalanga	60
D	Mokgethwa	F	7	Nelson Ngubeni Primary	Mpumalanga	60
0	Ntuli	F	8	Percular Junction	Mpumalanga	60
ТМ	Monyeki	F	9	Capricorn High school	Limpopo	60
ΤN	Seaba	М	9	Dendron Secondary	Limpopo	60
ΒT	Knock	F	9	Bergsig Academy	North West	60
LV	Visagie	М	9	Kismet Secondary	North West	60
RK	Kokatay	F	9	Kismet Secondary	North West	60
MT	Terb Inche	М	9	Potchefstroom Gimnasium	North West	60
LA	Calenborne	М	7	Kloof Senior Primary	KwaZulu-Natal	60
DP	Chiwese	М	7	Kloof Senior Primary	KwaZulu-Natal	60
NN	Msimanga	F	7	Mfongosi school	KwaZulu-Natal	60
S	Qwabe	F	7	Ncotshane	KwaZulu-Natal	60
NP	Ntshiza	F	7	Nkwezela Primary	KwaZulu-Natal	60
SS	Duma	М	7	Phumelelani	KwaZulu-Natal	60
Ν	Mbatha	F	8	Mfongosi school	KwaZulu-Natal	60
NN	Bhengu	F	8	Mfongosi school	KwaZulu-Natal	60

VM	Maphumulo	М	8	Star College Durban	KwaZulu-Natal	60
AD	Dowlath	M	8	Star College Durban	KwaZulu-Natal	60
YN	Naidoo	F	8	Star College Durban	KwaZulu-Natal	60
S	Dawood	F	9	Al falaah college	KwaZulu-Natal	60
LB	Nkosi	M	9	Mfongosi school	KwaZulu-Natal	60
SM	Khuzwayo	F	9	Nondenisa Secondary	KwaZulu-Natal	60
AM	Mitha	F	9	Star College Durban	KwaZulu-Natal	60
JR	Rambulip	М	9	Star College Durban	KwaZulu-Natal	60
MM	Mpanza	М	9	Star College High Durban	KwaZulu-Natal	60
R	Grunewald	F	8	Stirling High	Eastern Cape	60
С	Cocks	М	8	Stirling High	Eastern Cape	60
JN	Heather clark	М	7	Camps Bay Primary	Western Cape	60
S	Hans	F	7	Mbekweni Primary	Western Cape	60
HF	Fataar	М	8	Star college Bridgetown	Western Cape	60
М	Adams	М	9	Harold cressy High	Western Cape	60
AH	Dicks	F	9	Hoerskool Bellville	Western Cape	60
HA	Parker	F	9	Hoerskool Bellville	Western Cape	60
AL	Denton	F	9	Hoerskool Bellville	Western Cape	60
SS	Velani	М	9	Protea Heights Academy	Western Cape	60
BK	Kgwadi	М	9	Protea heights Academy	Western Cape	60
Н	Moollajie	М	9	Star College Bridgetown	Western Cape	60
AJ	Barry	F	9	Star College Cape Town	Western Cape	60
AM	Kamwendo	F	9	Hotazel College	Northern Cape	60
JB	Boshoff	F	9	Lydenburg Hoerskool	Mpumalanga	60
А	Singh	М	7	Redhill School	Gauteng	60
R	Pillay	М	9	Edenglen High School	Gauteng	60
TD	Dawson	F	8	Alberton High	Gauteng	60
Ρ	Twala	F	8	Mahlahle Combined Independent	Limpopo	60
Ν	Khosa	М	9	Mahlahle Combined Independent	Limpopo	60
R	Mokhoka	М	9	Protea heights Academy	Western cape	60



## Natural Sciences Grade 4-6

Initials	Surname	Gender	Grade	School Name	Province	Total
SJ	Jama	М	6	H2 Primary	Eastern Cape	83
WM	Muridili	F	5	Bashasha Primary	Limpopo	82
NR	Fhedzisani	М	6	Bashasha Primary	Limpopo	82
IF	Kondile	F	6	Mbekweni Primary	Western Cape	82
TT	Mafukidze	М	5	Model Private	Eastern Cape	81
W	Mayisa	F	6	Ncotshane	KwaZulu-Natal	80
BM	Maree	М	5	Rondebosch Boys Preparatory	Western Cape	80
AA	Dhladhla	F	6	Keates Drift Primary	KwaZulu-Natal	79
LP	Magagula	F	6	Lalela Primary	KwaZulu-Natal	79
А	Sibiya	F	5	Pomeroy CP	KwaZulu-Natal	79
А	Malusi	F	6	Mbekweni Primary	Western Cape	79
LZ	Kunene	F	6	Schulzendal	Mpumalanga	78
А	Gama	F	5	Ncotshane	KwaZulu-Natal	78
S	Tyityi	М	5	Nompulelo S.P.S	Eastern Cape	78
К	Dumbela	М	5	Nompulelo S.P.S	Eastern Cape	78
М	Joshua	М	6	Vista Nova	Western Cape	78
ΜP	Debele	F	4	Nelson ngubeni Primary	Mpumalanga	78
IS	Witherspoon	F	5	Hilton Montessori	KwaZulu-Natal	77
AA	Gule	F	4	Keates Drift Primary	KwaZulu-Natal	77
AZ	Majola	F	4	Nhlonhlweni Primary	KwaZulu-Natal	77
0	Peyi	F	5	Nompulelo S.P.S	Eastern Cape	77
S	Thomas	F	4	Nompulelo S.P.S	Eastern Cape	77
L	Gqodwana	F	6	Nompulelo S.P.S	Eastern Cape	77
L	Gaji	F	6	Nompulelo S.P.S	Eastern Cape	77
NF	Jack	F	6	Mbekweni Primary	Western Cape	77
СВ	Reyburn	М	5	Hatfield Christian	Gauteng	76
JN	Ndlovu	F	6	Schulzendal	Mpumalanga	76
SS	Mthabela	М	6	Ingweni Primary	KwaZulu-Natal	76
L	Gwamanda	F	6	Pomeroy CP	KwaZulu-Natal	76
L	Tom	М	6	Nompulelo S.P.S	Eastern Cape	76
ОН	Dziba	F	6	Mbekweni Primary	Western Cape	76
JJ	Jonkers	F	6	Rusthof Primary	Western Cape	76
NH	Hendricks	F	6	Rusthof Primary	Western Cape	76
Р	Molekwa	F	4	Laerskoolwarmbad	Limpopo	75
MN	Zungu	F	5	Nzamazane Primary	KwaZulu-Natal	75

L	Ngobese	F	5	Nzamazane Primary	KwaZulu-Natal	75
OS	Dlamuka	F	5	Nzamazane Primary	KwaZulu-Natal	75
SB	Ngubane	F	5	Nzamazane Primary	KwaZulu-Natal	75
ΤK	Khumalo	F	6	Nzamazane Primary	KwaZulu-Natal	75
S	Tyityi	М	5	Nompulelo S.P.S	Eastern Cape	75
ММ	Soganga	М	6	Nompulelo S.P.S	Eastern Cape	75
S	May	F	4	Nompulelo S.P.S	7	75
Р	Zungula	F	6	Nompulelo S.P.S	Eastern Cape	75
SS	Steer	М	6	Rondebosch Boys Preparatory	Western Cape	75
JM	Muller	М	6	Rusthof Primary	Western Cape	75
S	Machengo	F	6	SA College Private	Gauteng	74
MP	Thema	F	6	Ramotlhale Primary	Limpopo	74
BS	Mthemthwa	М	6	Nzamazane Primary	KwaZulu-Natal	74
ES	Ngcobo	М	6	Nzamazane Primary	KwaZulu-Natal	74
N	Mhlongo	F	6	Nzamazane Primary	KwaZulu-Natal	74
A	Zuke	F	5	Nzamazane Primary	KwaZulu-Natal	74
NA	Mabaso	F	5	Nzamazane Primary	KwaZulu-Natal	74
UM	Ntuli	М	6	Nzamazane Primary	KwaZulu-Natal	74
LS	Mpanza	М	6	Nzamazane Primary	KwaZulu-Natal	74
S	Mqadi	F	6	Keates Drift Primary	KwaZulu-Natal	74
UT	Dlamini	F	6	Nkwezela Primary	KwaZulu-Natal	74
М	Mzondi	F	4	Nompulelo S.P.S	Eastern Cape	74
U	Zungula	F	6	Nompulelo S.P.S	Eastern Cape	74
А	Mini	F	6	Mbekweni Primary	Western Cape	74
MG	Wenman	М	5	Rondebosch Boys Preparatory	Western Cape	74
L	Metz	F	6	Camps Bay Primary	Western Cape	74
JW	Gaylard	М	5	Fishhoek Primary	Western Cape	74
CL	Lange	М	6	Outeniqua Primary	Western Cape	74
Р	Masilela	М	5	Nelson Ngubeni Primary	Mpumalanga	74
RN	Sono	F	6	Schulzendal	Mpumalanga	73
HS	Modise	F	6	Sizuzile Primary	Mpumalanga	73
TD	Mushan angisi	F	6	Mariadze Primary	Limpopo	73
ΡZ	Mzobe	F	6	Nyamazane Primary	KwaZulu-Natal	73
SA	Dlomo	F	4	Nyamazane Primary	KwaZulu-Natal	73
MV	Mgenge	F	4	Nyamazane Primary	KwaZulu-Natal	73
К	Mkhwanazi	М	6	Nkomo Full Service Primary	KwaZulu-Natal	73
AV	Mncwabe	F	6	Nkwezela Primary	KwaZulu-Natal	73
SJ	Mkhize khize	М	6	Nkwezela Primary	KwaZulu-Natal	73
Р	Khoza	М	6	Pomeroy C.P	KwaZulu-Natal	73
AC	Nzama	F	5	Egweni Primary	KwaZulu-Natal	73

А	Cabane	F	6	Model private	Eastern Cape	73
SW	Weaver	М	5	Rondebosch Boys preparatory	Western Cape	73
LC	Scott	М	6	Rondebosch Boys preparatory	Western Cape	73
JW	Webb	М	6	Rondebosch Boys preparatory	Western Cape	73
CV	Van boom	F	6	Rusthof Primary	Western Cape	73
К	Маера	F	5	Nelson Ngubeni Primary	Mpumalanga	73
JI	Maseko	М	6	Sizuzile Primary	Mpumalanga	72
F	Manganyin a g	F	4	Dumani Primary	Limpopo	72
ZB	Botha	F	6	Laerskoolwarmbad	Limpopo	72
YK	Masango	F	6	Nyamazane Primary	KwaZulu-Natal	72
L	Thipa	F	6	Nyamazane Primary	KwaZulu-Natal	72
LE	Ntuli	F	6	Nyamazane Primary	KwaZulu-Natal	72
SN	Ngema	F	4	Nyamazane Primary	KwaZulu-Natal	72
КМ	Ntuli	F	4	Nyamazane Primary	KwaZulu-Natal	72
SS	Mhlongo	F	6	Nyamazane Primary	KwaZulu-Natal	72
SK	Nguban e	F	6	Nyamazane Primary	KwaZulu-Natal	72
ТА	Sosibo	F	5	Malus Omuhle Primary	KwaZulu-Natal	72
NA	Nene	М	4	Malus Omuhle Primary	KwaZulu-Natal	72
LU	Mlambo	F	6	Malus Omuhle Primary	KwaZulu-Natal	72
КА	Dludla	F	5	Malus Omuhle Primary	KwaZulu-Natal	72
NA	Mabaso	F	6	Malus Omuhle Primary	KwaZulu-Natal	72
RK	Khuram	М	6	H2 Primary	Eastern Cape	72
D	Masiza	F	6	Mbekweni Primary	Western Cape	72
A	Dutoit	М	6	Montgomery + Miller Primary	Western Cape	72
DW	Webber	М	5	Rondebosch Boys preparatory	Western Cape	72
ER	Roos	М	6	Rusthof Primary	Western Cape	72
Н	Magabe	М	6	Moroleng Primary	Limpopo	72
D	Du preez	М	6	Farrarmere Primary	Gauteng	71
М	Ndebele	F	6	SA College Private	Gauteng	71
TR	Sibanyoni	М	6	Sizuzile Primary	Mpumalanga	71
PN	Buda	F	6	Sizuzile Primary	Mpumalanga	71
SM	Khoza	М	6	Meridian Karino	Mpumalanga	71
S	Mashimbye	F	4	Dumani Primary	Limpopo	71
М	Mathonsi	F	4	Dumani Primary	Limpopo	71
М	Manganyi	М	4	Dumani Primary	Limpopo	71
R	Makhuvhele	F	4	Dumani Primary	Limpopo	71
N	Chavalal a	F	4	Dumani Primary	Limpopo	71
Р	Groble r	М	4	Laerskoolwarmbad	Limpopo	71
S	Phanyela	F	6	Stanger Primary	KwaZulu-Natal	71
SB	Zungu	F	6	Nyamazane Primary	KwaZulu-Natal	71

NA	Motha	F	4	Sidumuka Primary	KwaZulu-Natal	71
AZ	Zwane	F	6	Ingweni Primary	KwaZulu-Natal	71
NZ	Khanyile	 F	5	Keates Drift Primary	KwaZulu-Natal	71
AA	Mlotshwa	F	6	Malusi Omuhle Primary	KwaZulu-Natal	71
NS	Hlabisa	F	5	Malusi Omuhle Primary	KwaZulu-Natal	71
NS	Ngema	 F	6	Mayakazi Primary	KwaZulu-Natal	71
ZN	Ngwane	 F	6	Nkomo Full Service Primary	KwaZulu-Natal	71
OJ	mabika	M	5	Nkomo Full Service Primary	KwaZulu-Natal	71
AO	Ndonyela*	M	6	Model Private	Eastern Cape	71
1	May	M	4	Nompulelo S.P.S	Eastern Cape	71
TR	Vanzylsmit	M	6	Rondebosch Boys Preparatory	Western Cape	71
КМ	De witt e	M	4	Farrarmere Primary	Gauteng	70
K	Bailey	F	5	Farrarmere Primary	Gauteng	70
ММ	Rikhotso	F	6	Jinnah Park	Limpopo	70
L	Nkuna	F	4	Dumani Primary	Limpopo	70
S	Kubayi	F	4	Dumani Primary	Limpopo	70
N	Manganye	M	4	Dumani Primary	Limpopo	70
M	Mhangwani	M	4	Dumani Primary	Limpopo	70
J		F	4			70
J TA	Ngoveni	M	6	Dumani Primary	Limpopo	70
	Dzhangi Nhamachua		6	Mariadze Primary	Limpopo KwaZulu-Natal	70
S		M		Stanger Primary		
SW	Gabela	F	6	Sidumuka Primary	KwaZulu-Natal	70
NA	Siyaya	F	6	Sonkabi	KwaZulu-Natal	70
NM	Khumalo	F	6	Sonkabi	KwaZulu-Natal	70
ON	Mbeje	F	6	Keates Drift Primary	KwaZulu-Natal	70
S	Khumalo	F	5	Kwamame Full Service Primary	KwaZulu-Natal	70
SS	Mkhwanazi	M	6	Malusi Omuhle Primary	KwaZulu-Natal	70
SB	Mazibuko	F	4	Malusi Omuhle Primary	KwaZulu-Natal	70
FL	Ndlovu	F	5	Nkomo Full Service Primary	KwaZulu-Natal	70
N	Dlamini	F	6	Nkwezela Primary	KwaZulu-Natal	70
NL	Mkhize	F	6	Nkwezela Primary	KwaZulu-Natal	70
SP	Mtolo	M	6	Nkwezela Primary	KwaZulu-Natal	70
М	Khumalo	F	5	Pomeroy C.P School	KwaZulu-Natal	70
SE	Nxumalo	F	6	Phumelelani Primary	KwaZulu-Natal	70
TS	Mlaba	F	6	Phumelelani Primary	KwaZulu-Natal	70
MW	Nx umalo	F	6	Empangeni Preparatory	KwaZulu-Natal	70
0	Njovane	F	6	Mbekweni Primary	Western Cape	70
HL	Lee	М	6	Rondebosch Boys Preparatory	Western Cape	70
NC	Coerecius	F	6	Rusthof Primary	Western Cape	70
LJ	Jakobs	F	6	Rusthof Primary	Western Cape	70

A	Zitianellis	F	6	Camps bay Primary	Western Cape	70
J	Shi	М	4	Pridwin preparatory	Gauteng	69
Ν	Naidu	F	6	Village Montessori	Gauteng	69
AN	Mia	М	5	Lenasia Muslim School	Gauteng	69
MF	Mtshweni	F	5	Sizuzile Primary	Mpumalanga	69
AK	Раро	F	6	Jinnah Park	Limpopo	69
PT	Mabato	М	6	Ramotlhale Primary	Limpopo	69
RT	Chokoe	F	6	Pulamadibogo	Limpopo	69
N	Mangany i	F	4	Dumani Primary	Limpopo	69
М	Rivimbi	F	4	Dumani Primary	Limpopo	69
N	Makhuvele	F	4	Dumani Primary	Limpopo	69
LS	Maziya	F	5	Sonkabi	KwaZulu-Natal	69
AK	Mkhwanazi	F	6	Sonkabi	KwaZulu-Natal	69
Х	Khumalo	F	5	Kwamgabo Primary	KwaZulu-Natal	69
L	Nkomo	F	4	Kwamgabo Primary	KwaZulu-Natal	69
AX	Khoza	М	5	Kwamgabo Primary	KwaZulu-Natal	69
ZM	Zungu	М	6	Malusi Omuhle Primary	KwaZulu-Natal	69
AS	Ndwandwe	F	5	Malusi Omuhle Primary	KwaZulu-Natal	69
S	Shezi	М	6	Nkwezela Primary	KwaZulu-Natal	69
YN	Zondi	F	6	Nkwezela Primary	KwaZulu-Natal	69
SU	Shezi	М	4	Sidumuka Primary	KwaZulu-Natal	69
NS	Mbuthu	F	6	Empangeni Preparatory	KwaZulu-Natal	69
LZ	Zwane	М	6	Empangeni Preparatory	KwaZulu-Natal	69
S	Dangazele	F	6	Model Private	Eastern Cape	69
S	Singh	F	6	Model Private	Eastern Cape	69
RG	Mulder	М	6	King Edward High	Eastern Cape	69
S	Nhonho	F	6	Mbekweni Primary	Western Cape	69
KS	Kwekwe	F	5	Lekkerbreek	Limpopo	69
М	Nkabinde	F	5	Sizuzile Primary	Mpumalanga	68
N	Makhuvele	F	4	Dumani Primary	Limpopo	68
К	Khosa	F	4	Dumani Primary	Limpopo	68
NN	Mabaso	F	5	Sidumuka Primary	KwaZulu-Natal	68
AA	Shabangu	F	6	Sidumuka Primary	KwaZulu-Natal	68
ОМ	Vumase	F	5	Sonkabi	KwaZulu-Natal	68
К	Zwan e	F	4	Kwamame Full Service Primary	KwaZulu-Natal	68
NM	Ntenga	F	4	Malusi Omuhle Primary	KwaZulu-Natal	68
PA	Dludla	F	4	Malusi Omuhle Primary	KwaZulu-Natal	68
N	Diamini	F	6	Nkwezela Primary	KwaZulu-Natal	68
S	Mkhize	F	6	Nkwezela Primary	KwaZulu-Natal	68
MP	Mashiyane	F	6	Nqiwaneni Primary	KwaZulu-Natal	68

CL	Khoza	М	6	Phumelelani Primary	KwaZulu-Natal	68
SS	Mazibuko	F	6	Phumelelani Primary	KwaZulu-Natal	68
ON	Majozi	F	6	Empangeni Preparatory	KwaZulu-Natal	68
OM	Mpanza	М	6	Empangeni Preparatory	KwaZulu-Natal	68
E	Qinga	F	6	Mbekweni Primary	Western Cape	68
	Cekiso	F	6	Mbekweni Primary	Western Cape	68
L	Mnyengeza	F	5	Mbekweni Primary	Western Cape	68
R	Makola	F	4	Nelson ngubeni Primary school	Mpumalanga	68
RI	Haffejee	F	6	Lenasia Muslim School	Gauteng	67
N	Tsotetsi	F	4	Hlobisa Primary	Mpumalanga	67
V	Hlungwani	F	4	Dumani Primary	Limpopo	67
ĸ	Kubayi iuy	F	4	Dumani Primary	Limpopo	67
V	Maphalakasi	M	6	Masekani Primary	Limpopo	67
L	Manickum	M	6	Hilton Montessori	KwaZulu-Natal	67
L	Sibeko	F	6	Ingweni Primary	KwaZulu-Natal	67
AS	Mchunu	M	5	Keates Drift Primary	KwaZulu-Natal	67
SB	Berndt	F	6	Kloof Senior Primary	KwaZulu-Natal	67
NN	Khoza	 M	6	Kwamgabo Primary	KwaZulu-Natal	67
S	Mathaba	M	5	Matshana Primary	KwaZulu-Natal	67
SN	Dlamini	F	4	Nkomo Full Service Primary	KwaZulu-Natal	67
BW	Thethwayo	F	4	Nkomo Full Service Primary	KwaZulu-Natal	67
ST	Khumaloo	F	6	Nkwezela Primary	KwaZulu-Natal	67
ZC	Nhlapho	F	6	Ngiwaneni Primary	KwaZulu-Natal	67
N	Chili	F	6	Emanyonini Primary	KwaZulu-Natal	67
N	Mzelemu	F	6	Emanyonini Primary	KwaZulu-Natal	67
A	Ngcobo	F	5	Emanyonini Primary	KwaZulu-Natal	67
SA	Ngiba	M	6	Empangeni Preparatory	KwaZulu-Natal	67
1	Babane	F	6	Mbekweni Primary	Western Cape	67
NH	Harris	M	6	Rondebosch Boys Preparatory	Western Cape	67
V	Reddy	F	6	Athlone Park Primary	KwaZulu-Natal	67
L	Msiza	M	5	Nelson Ngubeni Primary	Mpumalanga	67
S	Alutenkeu	F	6	Arcadia Primary school	Gauteng	66
P	Mello	F	6	Glenanda Primary	Gauteng	66
M	Adam	M	5	Lenasia musl m school	Gauteng	66
XN	Ndlovu	M	6	Sizuzileprimar yschool	Mpumalanga	66
R	Collett	M	6	North Primary	Free State	66
S	Sefoka	F	5	Lekkerbreek	Limpopo	66
V	Kubayi	F	4	Dumani Primary	Limpopo	66
S	Patele	M	6	Emmanuel christian	Limpopo	66
MS	Maela	F	6	Mariadze Primary	Limpopo	66

М	Munyai	F	6	Mariadze Primary	Limpopo	66
F	Mashanyu	F	6	Mariadze Primary	Limpopo	66
AE	Makhomu	F	6	Mariadze Primary	Limpopo	66
R	Nyalungu	М	6	Masekani	Limpopo	66
Ν	Mkhwanazi	F	6	Sidumuka	KwaZulu-Natal	66
LP	Ngubo	F	6	StphilipsPrim	KwaZulu-Natal	66
А	Ndimande	М	6	NkwezelaPrimary	KwaZulu-Natal	66
AP	Duma	F	6	NkwezelaPrimary	KwaZulu-Natal	66
Z	Dlamini	F	6	Nkwezela Primary	KwaZulu-Natal	66
А	Ntshangasestn	F	5	Emanyoninii	KwaZulu-Natal	66
ML	Cele	М	6	Empangeni preparatory	KwaZulu-Natal	66
YA	Zulu	F	6	Empangeni preparatory	KwaZulu-Natal	66
AB	Miya	F	6	Empangeni preparatory	KwaZulu-Natal	66
AZ	Nkxoyi	F	6	Model Private	Eastern Cape	66
I	Mtshutshisi	F	5	Mankomo F.S.S	Eastern Cape	66
OU	Merikana	F	5	Mbekweni Primary	Western Cape	66
NL	Lautenbach	М	5	Rondebosch Boys Preparatory	Western Cape	66
А	Alexander	F	6	Fishhoek Primary	Western Cape	66
LS	Van der Merwe	F	5	Fishhoek Primary	Western Cape	66
Т	Moodley	F	6	Athlone Park Primary	KwaZulu-Natal	66
JS	Viljoen	F	6	German School	Western Cape	66
LD	Selepe	F	4	Hlobisa Primary	Mpumalanga	65
PM	Mosah	М	6	Hlobisa Primary	Mpumalanga	65
КM	Mamabolo	F	4	Pulamadibogo	Limpopo	65
SY	Moha	F	6	Lekkerbreek	Limpopo	65
F	Munzhelele	F	6	Mariadze Primary	Limpopo	65
R	Mushanganyisi	М	6	Mariadze Primary	Limpopo	65
LC	Mugwena	F	6	Mariadze Primary	Limpopo	65
TR	Ramaite	F	6	Mariadze Primary	Limpopo	65
М	Mavhut ha	М	6	MariadzePrimary	Limpopo	65
MM	Ramashia	F	6	Masekani	Limpopo	65
К	Smith	F	5	Laerskoolwarmbad	Limpopo	65
AS	Ngema	М	5	Sonkabi	KwaZulu-Natal	65
SS	Ngqulunga	М	4	Keates driftpr i ary	KwaZulu-Natal	65
SZ	Zulu	F	4	Keatesdrift Primary	KwaZulu-Natal	65
Ν	Khumaio	F	4	Kwamame fs school	KwaZulu-Natal	65
L	Jangaza	F	5	Kwamame fs school	KwaZulu-Natal	65
SG	Thabede	F	5	KwamgaboPrimary	KwaZulu-Natal	65
KS	Zikalala	F	5	Kwamgabo Primary	KwaZulu-Natal	65
A	Mthethwa	М	4	Matshana Primary	KwaZulu-Natal	65

AS	Duma	F	6	Nkwezela Primary	KwaZulu-Natal	65
В	Khumalo	М	6	Meme Primary	KwaZulu-Natal	65
К	Ndlovu	М	6	Qalimfundo Primary	KwaZulu-Natal	65
К	Gcabashe	F	6	Qalimfundo Primary	KwaZulu-Natal	65
В	Ngcobo	F	6	Qalimfundo Primary	KwaZulu-Natal	65
А	Ngcobo	F	5	Emanyonini Primary	KwaZulu-Natal	65
К	Mthethwa	F	5	Emanyonini Primary	KwaZulu-Natal	65
UA	Mbatha	F	6	Empangeni Prepatory	KwaZulu-Natal	65
А	Dlamini	F	6	Mankomo F.S.S	Eastern Cape	65
L	Sukude	F	6	Mankomo F.S.S	Eastern Cape	65
NM	Poulter	М	6	Rondebosch Boys Preparatory	Western Cape	65
LJ	Veary	М	5	Rondebosch Boys Preparatory	Western Cape	65
TG	Pieterse	М	4	Rusthof Primary	Western Cape	65
CJ	Apollis	F	4	Rusthof Primary	Western Cape	65
СТ	Louw	М	5	Postmasburg Primary	Northern Cape	65
М	Pearce	М	6	Athlone Park Primary	KwaZulu-Natal	65
R	Mtileni	F	6	Mahlahle Combined Independent	Limpopo	65
В	Shone	F	5	Balmoral Girls Primary	Eastern Cape	65
W	Tshililo	F	6	Arcadia Primaryyschool	Gauteng	64
D	Mcghee	М	6	Farrarmere Primary	Gauteng	64
VA	Nel	М	6	Farrarmere Primary	Gauteng	64
Н	Dangor	М	6	Lenasia Muslim School	Gauteng	64
Т	Sarang	F	5	Lenasia Muslim School	Gauteng	64
HC	Gumede	F	6	Phakamani Primary	Mpumalanga	64
ME	Sihlangu	F	6	Sizuzile Primary	Mpumalanga	64
KS	Radebe	F	5	Machaea Primary	Free State	64
KJ	Mavulula	М	6	Jinnah Park	Limpopo	64
L	Moloantoa	F	5	Lekkerbreek	Limpopo	64
MT	Muluvhu	М	6	Mariadze Primary	Limpopo	64
AJ	Muhali	F	6	Mariadze Primary	Limpopo	64
К	Mukwevho	F	6	Mariadze Primary	Limpopo	64
DD	Mthombeni	F	6	Masekani	Limpopo	64
0	Thenga	F	6	Mariadze Primary	Limpopo	64
С	Degroot	М	5	Laerskoolwarmbad	Limpopo	64
NN	Masondo	F	4	Sidumukaa	KwaZulu-Natal	64
MN	Ntombeiae	F	4	Sidumuk a	KwaZulu-Natal	64
KR	Ramphal	М	6	Starcollege	KwaZulu-Natal	64
KR	Ramraj	М	6	Starcollege	KwaZulu-Natal	64
К	Tatar	М	6	Starcollege	KwaZulu-Natal	64

Т	Mabizela	F	4	Kwamame FS	KwaZulu-Natal	64
В	Mvelase	F	6	Kwamgabo Primary	KwaZulu-Natal	64
SS	Mbambo	F	6	Kwamgabo Primary	KwaZulu-Natal	64
S	Zondi	M	6	Nkwezela Primary	KwaZulu-Natal	64
AS	Duma	F	6	Nkwezela Primary	KwaZulu-Natal	64
N	Zondo	M	6	Nongoma Intermediate	KwaZulu-Natal	64
AT	Nthiyane	F	6	Mnotho Primary	KwaZulu-Natal	64
SS	Manqele	F	6	Mnotho Primary	KwaZulu-Natal	64
LS	Memela	F	5	Nkwezela Primary	KwaZulu-Natal	64
DC	Dlamini	M	5	Ebusingatha Primary	KwaZulu-Natal	64
TJ	Kali	M	6	Ebusingatha Primary	KwaZulu-Natal	64
Sayuri	Pillay	F	6	Berea Primary	KwaZulu-Natal	64
1	Siduwa	F	6	Mankomo F.S.S	Eastern Cape	64
ZT	Tshaka	M	5	H2 Primary	Eastern Cape	64
OC	Kweza	F	6	Mbekweni Primary	Western Cape	64
W	Valentyn	F	6	Laerskool springbok	Northern Cape	64
MP	Parker	M	5	Rondebosch Boys Preparatory	Western Cape	64
TG	Gordon	M	6	Rondebosch Boys Preparatory	Western Cape	64
DM	McHarg	M	4	Farramere Primary	Gauteng	63
OB	Mbhele	F	5	Hlobisa Primary	Mpumalanga	63
ML	Hlatshwayo	M	5	Hlobisa Primary	Mpumalanga	63
ТН	Tsotetsi	M	6	Hlobisa Primary	Mpumalanga	63
ST	Makhubu	M	6	Hlobisa Primary	Mpumalanga	63
K	Tsotetsi	F	6	Hlobisa Primary	Mpumalanga	63
В	Mahlamba	M	5	Machaea Primary	Free State	63
LM	Letsoalo	F	6	Pulamadibogo	Limpopo	63
*	Kgaole	F	5	Lekkerbreek	Limpopo	63
ММ	Molekoa	F	6	Lekkerbreek	Limpopo	63
KC	Baloyi	F	6	Mariadze Primary	Limpopo	63
Т	, Sebata	F	6	, Mariadze Primary	Limpopo	63
NB	Ramusetha	F	6	, Mariadze Primary	Limpopo	63
PI	Litshani	М	6	Mariadze Primary	Limpopo	63
М	Muhali	F	6	Mariadze Primary	Limpopo	63
НН	Makhuvele	F	5	Masekani Primary	Limpopo	63
L	Prinsloo	F	5	Laerskoolwarmbad	Limpopo	63
JM	Mothoa	M	6	Sepedi Primary	Limpopo	63
KT	Gasa	M	6	Sidumuka	KwaZulu-Natal	63
GM	Gabela	F	5	Sidumuka	KwaZulu-Natal	63
ON	Dhladhla	F	5	Keatesdrift Primary	KwaZulu-Natal	63
L	Mkhize	M	6	Nkwezela Primary	KwaZulu-Natal	63

SO	Mbanjwa	F	6	Nkwezela Primary	KwaZulu-Natal	63
SP	Khumalo	F	6	Nkwezela Primary	KwaZulu-Natal	63
TS	Zondi	M	6	Nkwezela Primary	KwaZulu-Natal	63
MS	Khumalo	F	5	Nkwezela Primary	KwaZulu-Natal	63
WM	Biyela	M	5	Mnotho Primary	KwaZulu-Natal	63
S	Ntuli	M	6	Qalimfundo Primary	KwaZulu-Natal	63
A	Maphumulo	F	6	Qalimfundo Primary	KwaZulu-Natal	63
M	Mngadi	M	6	Qalimfundo Primary	KwaZulu-Natal	63
DB	Bangadiwala	F	6	Berea Primary	KwaZulu-Natal	63
AH	Mnqoto	F	6	Model Private	Eastern Cape	63
L	Sikebhele	M	6	Mankomo F.S.S	Eastern Cape	63
0	Nguza	F	6	Mankomo F.S.S	Eastern Cape	63
BO	Oosthuizen	M	6	Longacres Privaatskool	Western Cape	63
A	Makade	M	5	Mbekweni Primary	Western Cape	63
MP	Powell	M	5	Rondebosch Boys Preparatory	Western Cape	63
JC	Claasen	F	6	Rusthof Primary	· ·	63
JM	Maldon	F	6		Western Cape	63
				Camps Bay Primary	Western Cape	
T	Baadjies	F	4	Rusthof Primary	Western Cape	63
R	Ebrahim	F	6	Turfhall Primary	Western Cape	63
TP	Mmila	F	4	Nelson ngubeni Primary	Mpumalanga	63
N	Sigudla	M	4	Nelson ngubeni Primary	Mpumalanga	63
KT	Thusi	M	6	Glenanda Primary	Gauteng	62
K	Pamhirwa	M	6	Sunnyridge Primary	Gauteng	62
1	Dudhia	F	6	Lenasia Muslim School	Gauteng	62
NP	Nkosi	F	6	Phakamani	Mpumalanga	62
TJ	Motloung	M	4	Hlobisa Primary	Mpumalanga	62
Z	Mzinyane	F	5	Hlobisa Primary	Mpumalanga	62
К	Mosia	F	5	Hlobisa Primary	Mpumalanga	62
SO	Moloi	F	6	Hlobisa Primary	Mpumalanga	62
G	Sithole	F	6	Hlobisa Primary	Mpumalanga	62
Т	Hlongwane	F	5	Machaea Primary	Free State	62
L	Nhlapo	М	6	North Primary	Free State	62
KL	Kwadi	М	6	Lekkerbreek	Limpopo	62
KL	Molwelang	F	6	Lekkerbreek	Limpopo	62
А	Mulovhedzi	F	6	Mariadze Primary	Limpopo	62
AI	Munyai	М	6	Mariadze Primary	Limpopo	62
NV	Makhomu	М	6	Mariadze Primary	Limpopo	62
IB	Mashau	F	6	Mariadze Primary	Limpopo	62
MM	Maedza	М	6	Mariadze Primary	Limpopo	62
R	Ramusetha	F	6	Mariadze Primary	Limpopo	62

N	Chauke	М	5	Muyexe Primary	Limpopo	62
N	Hlungwani	M	5	Muyexe Primary	Limpopo	62
M	Barnard	M	6	Laerskoolwarmbad	Limpopo	62
A	Mapholo	F	6	Rusplaas Christian Model	Limpopo	62
S	Eyob	F	6	Roshunville Primary	North West	62
A	Khanyile	F	4	Kwamgabo Primary	KwaZulu-Natal	62
A	Dladla	F	6	Kwamgabo Primary	KwaZulu-Natal	62
SO	Khumalo	M	5	Kwamgabo Primary	KwaZulu-Natal	62
В	Nzuza	M	4	Matshana Primary	KwaZulu-Natal	62
SM	Madlala	F	6	Nkwezela Primary	KwaZulu-Natal	62
0	Zondo	F	6	Nkwezela Primary	KwaZulu-Natal	62
AS	Dzanibe	М	6	, Nkwezela Primary	KwaZulu-Natal	62
G	Nsele	F	6	Qalimfundo Primary	KwaZulu-Natal	62
Т	Luthuli	М	6	Qalimfundo Primary	KwaZulu-Natal	62
0	Khoza	М	4	Qalimfundo Primary	KwaZulu-Natal	62
MT	Hlophe	М	5	Nkwezela Primary	KwaZulu-Natal	62
TN	Mathe	F	5	Nkwezela Primary	KwaZulu-Natal	62
MS	Cele	М	5	Nkwezela Primary	KwaZulu-Natal	62
WN	Molefe	М	4	Ebusingatha Primary	KwaZulu-Natal	62
ZN	Miya	F	4	Ebusingatha Primary	KwaZulu-Natal	62
W	Mkhize	М	5	Ebusingatha Primary	KwaZulu-Natal	62
NN	Khumalo	F	6	Ebusingatha Primary	KwaZulu-Natal	62
А	Shangase	F	5	Egweni Primary	KwaZulu-Natal	62
L	Nyamakazi	F	4	Mankomo F.S.S	Eastern Cape	62
SE	Stynes	М	6	Gene Louw Prmary	Western Cape	62
S	Ndolela	М	6	Mbekweni Primary	Western Cape	62
К	Sondamase	F	5	Mbekweni Primary	Western Cape	62
JW	Krige	М	6	Rondebosch Boys Preparatory	Western Cape	62
AR	Liebenberg	М	4	Rusthof Primary	Western Cape	62
MF	Madhani	М	6	Star College Cape Town	Western Cape	62
D	Steyn	М	4	Laerskool Oranje Noord	Northern Cape	62
JD	Naidoo	Male	5	Athlone Park Primary	KwaZulu-Natal	62
ΤV	Van Vuuren	Male	6	Outeniqua Primary	Western Cape	62
AL	Lala	F	6	Glenanda Primary	Gauteng	61
KG	Gilbert	F	6	Glenanda Primary	Gauteng	61
А	Mfungeni	F	6	SA College Private	Gauteng	61
Z	Vally	М	Gr6	Lenasia Muslim School	Gauteng	61
LC	Cindi	М	4	Hlobisa Primary	Mpumalanga	61
S	Mlotshwa	F	5	Hiobisa Primary	Mpumalanga	61
TT	Avontuur	F	6	Hlobisa Primary	Mpumalanga	61

LA	Nhlanhla	F	6	Hlobisa Primary	Mpumalanga	61
LG	Shongwe	F	5	Ekucathuzeni	Mpumalanga	61
Т	Moloi	F	5	Machaea Primary	Free State	61
N	Khumalo	F	6	Machaea Primary	Free State	61
А	Tshabalala	F	6	Machaea Primary	Free State	61
Ν	Maluleke	F	6	Muyexe Primary	Limpopo	61
А	Van Zyl	F	6	Laerskoolwarmbad	Limpopo	61
MA	Кдора	М	6	Sepedi Primary	Limpopo	61
ΤI	Mase mne	F	6	Sepedi Primary	Limpopo	61
КM	Kekana	F	6	Sepedi Primary	Limpopo	61
TR	Molomo	F	6	Sepedi Primary	Limpopo	61
ОМ	Matlhola	М	5	Selang Thuto Primary	North West	61
М	Vilakazi	F	5	Stanger Primary	KwaZulu-Natal	61
А	Mbatha	F	5	Siyathuthuka	KwaZulu-Natal	61
TP	Premjith	М	6	Star College Primary	KwaZulu-Natal	61
А	Patel	М	6	Star College Primary	KwaZulu-Natal	61
КМ	Xaba	F	4	Keates Drift Primary	KwaZulu-Natal	61
S	Goge	F	6	Meme Primary	KwaZulu-Natal	61
AQ	Mthembub m u	F	4	Mnotho Primary	KwaZulu-Natal	61
SS	Ngobese	F	6	Qediphika Primary	KwaZulu-Natal	61
NO	Mdlala	F	6	Qediphika Primary	KwaZulu-Natal	61
Z	Basi	F	4	Sakhayedwa	KwaZulu-Natal	61
AE	Shezi	F	5	Nkwezela Primary	KwaZulu-Natal	61
К	Chule	F	5	Nkwezela Primary	KwaZulu-Natal	61
PM	Mabaso	М	6	Emanyonini Primary	KwaZulu-Natal	61
М	Bhengu	М	6	Emanyonini Primary	KwaZulu-Natal	61
В	Khwela	М	5	Emanyonini Primary	KwaZulu-Natal	61
NR	Samanga	F	5	Creighton Primary	KwaZulu-Natal	61
SS	Hlongwane	М	6	Ebusingatha Primary	KwaZulu-Natal	61
ММ	Majonga	F	6	Berea Primary	KwaZulu-Natal	61
SL	Nzimande	F	5	Phumelelani Primary	KwaZulu-Natal	61
SZ	Mdakane	М	5	Phumelelani Primary	KwaZulu-Natal	61
SN	Naidu	F	6	EvergreenPrimary	KwaZulu-Natal	61
LF	Myeki	М	4	Model private	Eastern Cape	61
ON	Krwaqaza	F	5	Model private	Eastern Cape	61
MA	Mtsomo	М	6	Mkankomo FSS	Eastern Cape	61
LZ	Zozo	М	6	King edward High	Eastern Cape	61
U	Bobe	F	5	Mbekweni Primary	Western Cape	61
G	Phillips	F	6	Camps Bay Primary	Western Cape	61
BB	Manjoo	F	6	Star College Cape Town	Western Cape	61

SA	Yunnus	F	6	Athlone Park Primary	KwaZulu-Natal	61
NN	Mahlaule	М	6	Mahlahle Combined Independent	Limpopo	61
ZM	Mahomed	F	6	Erica Girls Primary	Eastern Cape	61
М	Profili rossotta	М	6	German School	Western Cape	61
L	Subramany	М	5	Aston Manor Primary	Gauteng	60
AC	Chhiba	М	6	Glenanda Primary	Gauteng	60
ТМ	Мадоо	F	6	Glenanda Primary	Gauteng	60
SS	Shabangu	F	6	Phakamani Primary	Mpumalanga	60
NI	Mathonsi	F	6	Phakamani Primary	Mpumalanga	60
FS	Mnguni	М	4	Hlobisa Primary	Mpumalanga	60
LG	Mahlangu	F	6	Hlobisa Primary	Mpumalanga	60
LI	Manyali	F	6	Hlobisa Primary	Mpumalanga	60
SN	Tshabalala	М	6	Hlobisa Primary	Mpumalanga	60
SQ	Mabunda	F	6	Ramotlhale Primary	Limpopo	60
FM	Dhlamini	F	6	Blaauwboschkuil Primary	Limpopo	60
EL	Kitopha	F	6	Blaauwboschkuil Primary	Limpopo	60
КН	Maluleke	М	6	Lekkerbreek	Limpopo	60
ST	Petrus	F	6	Blaauwboschkuil Primary	Limpopo	60
L	Khadiamovh a	F	6	Mariadze Primary	Limpopo	60
MP	Ngobeni	F	6	Mariadze Primary	Limpopo	60
S	Mashau	F	6	Mariadze Primary	Limpopo	60
AF	Khadiamovha	F	6	Mariadze Primary	Limpopo	60
М	Maedla	F	6	Mariadze Primary	Limpopo	60
ТО	Muliwa	F	6	Mariadze Primary	Limpopo	60
МО	Mulaudzi	F	6	Mariadze Primary	Limpopo	60
JJ	Maluzani	F	5	Masekani Primary	Limpopo	60
М	Mibara	F	6	Tshimedzwa Primary	Limpopo	60
PA	Claassens	М	6	Laerskool Warmbad	Limpopo	60
LK	Kolobe	F	5	Sepedi Primary	Limpopo	60
RM	Tloane	F	4	Sepedi Primary	Limpopo	60
BJ	Jamda	F	6	Selang Thuto Primary	Northern Cape	60
VM	Ken	F	6	Selang Thuto Primary	North West	60
L	Kulumane	F	6	Selang Thuto Primary	North West	60
SA	Langa	F	5	Sidumuka Primary	KwaZulu-Natal	60
YA	Mohammed Razmi	М	6	Star College Durban	KwaZulu-Natal	60
F	Chilengue	F	6	Imbaliyethu Primary	KwaZulu-Natal	60
М	Mgwaba	F	6	Imbaliyethu Primary	KwaZulu-Natal	60
Z	Gqibela	F	5	Imbaliyethu Primary	KwaZulu-Natal	60
SN	Zulu	М	6	Keates Drift Primary	KwaZulu-Natal	60

S	Buthelezi	F	6	Keates Drift Primary	KwaZulu-Natal	60
NP	Zulu	М	4	Keates Drift Primary	KwaZulu-Natal	60
MJ	Sheppard	М	5	Klook Senior Primary	KwaZulu-Natal	60
OV	Mncwabe	F	6	Nkwenzela Primary	KwaZulu-Natal	60
A	Dlamini	М	6	Nkwenzela Primary	KwaZulu-Natal	60
YN	Mthembu	F	5	Mnotho Primary	KwaZulu-Natal	60
RT	Molefe	F	4	Qediphika Primary	KwaZulu-Natal	60
AM	Mkhize	F	4	Qediphika Primary	KwaZulu-Natal	60
S	Thusini	М	5	Qediphika Primary	KwaZulu-Natal	60
AS	Mtshali	F	5	Qediphika Primary	KwaZulu-Natal	60
PR	Mtaka	М	5	Nkwenzela Primary	KwaZulu-Natal	60
YN	Dlamini	F	5	Creighton Primary	KwaZulu-Natal	60
AB	Nkabinde	F	6	Ebusingatha Primary	KwaZulu-Natal	60
LG	Tshali	F	5	Model Private	Eastern Cape	60
SL	Laher	М	6	AL Azhar High	Eastern Cape	60
MP	Phika	F	6	H2 Primary	Eastern Cape	60
ТМ	Mukonoweshuru	F	6	H2 Primary	Eastern Cape	60
ST	Toefy	F	5	Pinelands North Primary	Western Cape	60
DW	Nortier	М	6	Gene Louw Prmary	Western Cape	60
AR	Nicholson	F	6	Camps Bay Primary	Western Cape	60
А	Thompson	М	6	Fishhoek Primary	Western Cape	60
S	Slamdien	F	6	Kenwyn Primary	Western Cape	60
TH	Hassan	F	6	Turfhall Primary	Western Cape	60
E	Wise	F	6	Camps Bay Primary	Western Cape	60
W	Smith	М	6	Laerskool Oranje Noord	Northern Cape	60
DS	Singh	М	6	Athlone Park Primary	KwaZulu-Natal	60
S	Shaik	F	6	Athlone Park Primary	KwaZulu-Natal	60
К	Dlamini	F	5	Athlone Park Primary	KwaZulu-Natal	60
N	Khosa	F	6	Mahlahle Combined Independent	Limpopo	60
MP	Hlekane	М	6	Mahlahle Combined Independent	Limpopo	60
Ν	Mehlala	F	6	Balmoral Girls Primary	Eastern Cape	60
NS	Skivington	F	6	Outeniqua Primary	Western Cape	60
MI	Williams	F	6	German School	Western Cape	60
Т	Nyauza	F	4	Nelson Ngubeni Primary	Mpumalanga	60
К	Khumalo	F	5	Nelson Ngubeni Primary	Mpumalanga	60

## NATIONAL SCIENCE OLYMPIAD AND COMPETITION RESULT BOOKLET

## Contact or vist us

ADVANCING KNOWLEDGE. TRANSFORMING LIVES. INSPIRING A NATION

**Postal Address:** PO Box 2600 Pretoria, 0001 South Africa **Physical Address:** Didacta Building 211 Nana Sita (Skinner) Pretoria, 0001, South Africa

Tel: +27 (0)12 392 9300 Fax: +27 (0)12 320 7803 ISBN: 978-1-86868-104-4