

Stellenbosch region 2012



Our diligent regional judges



SU Faculty of Education's new Dean, Dr Maureen Robinson, addresses participants



Inspirational words from Anré Swart, an engineer at Eskom



Stellenbosch region's national finalists

Introduction

It is with gratitude that I can reflect on a successful expo year in the Stellenbosch region. It was once again a privilege to offer a platform where learners could showcase their creativity and research, and as committee we were once again pleasantly surprised to see the high level of research which some learners manage to achieve. It goes without saying that a successful Expo event is never possible without dedicated educators, judges that willingly give up their time, parents that support their children, and sponsors who share our desire to promote science. I want to specially thank each member of the Stellenbosch organising committee for being invaluable and reliable pillars of strength.

1. Sponsorship

Without sponsors and donors it is impossible to run an exposition of good standard. For 2012 our sincere thanks go to the Het Jan Marais National Fund, Stellenbosch University, Tronox-Namakwa Sands, Eskom nationally, as well as Eskom in the Western Cape. A big thank to all who contributed towards this worthy cause!

2. Workshops

Three workshops for teachers and learners were conducted – one in Lochnerhof Primary School in Strand, one in Stellenbosch at Ithemba labs, and one in Vredenburg at the Arcelor Mittal science centre. About 40 educators and 400 learners attended these sessions. Unfortunately these efforts did not really pay-off well as few of these new schools came on board.

One workshop was held for new and inexperienced judges. This was a fruitful endeavour as an unanticipated group of 21 people attended!

To give participants and teachers tips for upgrading and polishing, all projects chosen for the national competition were visited by one or another committee member. This refining process as we know is of crucial importance in the growth and development of learners' scientific thinking.

3. Regional Expo

The regional competition was held on 23 and 24 August 2012 in Paul Roos Gymnasium's activity hall.

34 schools selected and entered their best projects, resulting in 229 projects (105 individual and 124 group projects) being exhibited by 351 participants. From these exhibitors 155 were in Gr 10 -12, 127 in Gr 8 – 9 and 69 in Gr 7. Learners younger than Gr 7 were allowed to enter the regional competition.

Three private schools, 7 urban schools, 15 peri-urban schools and 12 rural schools and were represented. Four schools took part for the very first time.

Only 35% of participants were male, the other 65% (naturally!) was female. Twenty one learners won gold medals, 43 silver and 54 bronze medals. Twenty four participants received special awards.

Eileen Theron won the Eskom prize for the best project by a girl participant, with her project on gastroenteritis as the main reason for children dying on farms in the Western Cape. Aletia Basson's project on sand mining in the Troe-Troe river near Vanrhynsdorp was Eskom's best development project. The project from Kaila Fourie where equal masses of white coal (compressed wood) and hard coal (anthracite) were burned and the heat energy released compared, won Eskom's best alternative energy prize. Eskom's award for energy efficiency went to An-Louise Engelbrecht and Chrisri Dyason. They concluded that a bottle full of water in the roof of an informal settlement home can save electricity and money.

There were 94 judges that sacrificed their time and energy to act as adjudicators. Every project was judged at least three times to come up with a well thought through, discussed final mark. This is of course always of paramount importance as judging is at the heart of every expo competition.

4. South African International Science Fair

Twenty seven research projects by 37 participants out of 15 schools were selected as regional representatives for the national competition held from 4 to 6 October 2012 at the Birchwood centre in Boksburg. Like in the past it is regarded as important to select projects from as many schools and districts as possible.

Due to financial constraints it was decided to make use of a bus to get to Boksburg. At the same time an educational tour was planned to make the long, tedious trip worthwhile.

We started at ARC Infruitec-Nietvoorbij in Stellenbosch with interesting talks, demonstrations and hands-on sessions on soil science, micro-biology, the making of wine and tissue cultures. The Eskom Palmiet hydroelectric pump storage scheme near Grabouw was visited next. This power station is 2 km from the Kogelberg dam wall in the Palmiet River, and is regarded as a forerunner in environmental engineering.

Disappointment was inevitable when serious mechanical problems were experienced with the bus, as this prevented us from honouring an appointment in Kimberley where the Big hole, an underground mine tour and the historic mine town were waiting on us! A trip on the Gautrain and visit to Nelson Mandela square in Sandton compensated to an extent for the discomfort and frustration experienced during the bus trip. The educational tour was concluded with a visit to the Boyden observatory in Bloemfontein on our way back.



A visit to ARC Infruitec-Nietvoorbij for a look at research in practice



The functioning of the Eskom Palmiet pump storage scheme in Grabouw was explained.



A trip on the Gautrain!



In awe of what technology makes possible - at the Boyden observatory in Bloemfontein

NATIONAL EXPO RESULTS 2012				
Category	Names	Gr	Project title	Award/s
Agricultural Sciences	Marista Smith Neline Burger	11	Klim opi byeboerwa	Silver medal
	Klara van der Walt	12	Erdwurmreste: Tee of kompos?	Silver medal
	Willem Walters	10	Lamhokstelsel bied vele voordele	
Chemistry	Nerita Kluyts	9	Vlekvrye staal is nie vlekvy nie.	Silver medal Category prize - best Gr 8, 9 project in Chemistry
Energy efficiency and energy conservation	An-Louise Engelbrecht	10	'n Bottel vol lig.	Bronze medal
Energy: Alternative and renewable	Kaila Fourie	9	Replacing coal with 'White coal' in the Western Cape	Gold medal Special prize – “Exhibitors award”
	Johan van der Merwe Ernst Niewoudt	10	Die gebruik van biogas in die huis	
	Franco Esterhuizen	9	Maak lemme 'n verskil?	Bronze medal
Engineering - Mechanical,	Werner Theron Santoné Benn	11	From peels to meals	Silver medal
Environmental Management:	Aletia Basson	8	Die invloed van onwettige sandmyne in die Troe-troe rivier.	Gold medal Special prize: Junior environmental prize from SAEON
	Cosima Babl	9	Weeds be Gone	
	Ashley Simpson Nancy Cloete	9	Ballast here, ballast there, ballast almost everywhere	Silver medal
	Genevia Ackers	10	Rook jy sal ons nie vernietig nie!!	
Environmental Science	Lee-Ann Cloete Mischa Carsten	11	Miere ons bure!	Bronze medal Special prize: Senior environment prize van SAEON
Food Sciences, Food Technology	Yolandi Philander Gerisca Smith	7	Die uitwerking van ensieme in vrugte.	Silver medal
Innovation and Technology,	Kiara De Jager Alene Holder	9	Vervang sand en klip in sementstene met gemaalde glas	Gold medal
	Elmarie Viljoen	11	Olie van plastiek	Silver medal Chosen to be considered for international participation
	Chané van der Westhuizen Robyn Collins	10	Tumble dryer saves oceans	Gold medal
	Nasca Kriel Willmaree Scheepers	9	Koel, koeler klaskamers	Silver medal
	Kalnisha Govender	10	Water storing crystals	Bronze medal
Mathematics and Statistics	Duan van Schalkwyk	9	Verbuikers val ver (of nie?): Huidige ekonomiese crises affekteer bestedingspatrone	Bronze medal
Medical Sciences - Human Biology	Maxine Smit Loré Botha	12	Korttermyn geheue word verbeter deur matige fisiese oefening voor memoriserings	Silver medal Category prize : Best senior Medical Sciences project
Medical Sciences - diseases	Marian Liebenberg	7	For your eyes only	
Physics, Astronomy and Space Science	Megan de Vos	9	How temperature affects the elasticity of polybutadiene in bouncy balls	Gold medal Chosen to be considered for international participation
	Petria Butler	9	Laai of laat waai?	Silver medal
	Sean Manas	10	Kleur vs energie	
	Anthea Boks	11	Sorg “sneeuwit”vir ‘n koeler rit	

5. Marketing

CD's with all the necessary info as well as info packs were sent out to invite schools in the wider Stellenbosch region to participate at regional level. The project guide books were put into the info packs and were distributed during training at workshops.

Three big banners with details were put up in Stellenbosch to invite visitors to attend the regional competition.

Local newspapers in the various districts of the Stellenbosch region published dates of the regional expo and prompted learners and teachers to become involved. After the regional and national competitions pictures of achievers were placed in the same newspapers again.

Blue Eskom Expo banners were also put up at Paul Roos Gymnasium where the regional competition was held.

6. International participation

Khumbulani Ntshidi and Abongile Hlaleleni were chosen to represent South Africa at the China Science Fair in Beijing, 21-27 March 2012. In their project they compared different batteries to determine whether more expensive batteries really lasted longer than less expensive ones. When asked what the trip meant to them, they answered that "an experience like that cannot be put in words"! During the regional competition they did however share their China experience with the 2012 expo participants.

7. General

I want to thank Priscilla, Rancia and the Eskom Expo board of directors for their strategic and supportive roles. Your guidance and care meant a lot to us at regional level; we cannot do it without you!



7 December 2012

Regional science fair director, Stellenbosch