

Annual report Stellenbosch region 2010



Regional exhibition



Woman's Memorial



Boyden Observatory



Maropeng visitors' centre



ABI manufacturing plant

Educational tour to Pretoria by bus



Stellenbosch's ambassadors in festive mood

1. Introduction

Like previous years, this year proved to have its unique challenges. The 2010 Soccer World Cup had a definite influence on learners and teachers' commitment to finalise their research projects during the June/July holiday. The teachers' strike also took its distinctive toll. This lack of a teaching and learning culture especially in township schools clearly impacted on Expo participation.

2. Sponsorship

Financial support of donors and sponsors helped in funding the regional competition. Our sincere thanks go to the Albert Wessels Trust, the Het Jan Marais National Fund, Exxaro, Eskom via the Expo national office, and the local (Western Cape) Eskom. At Stellenbosch University the faculties of AgriSciences, Arts and Social Sciences, Education, Engineering, Health Sciences and Sciences contributed to Expo by providing cash prizes for category winners. The Centre for Invasive Biology and South Africa's National Energy Research Institute contributed likewise. Without all of these contributions our regional competition would not have been possible.

3. Workshops

A Saturday workshop was held in Beaufort West and 2 Saturday workshops in Mooresburg. Five afternoon workshops were conducted at the University for learners in and around Stellenbosch.

4. Regional Expo

The regional competition was held on 26 and 27 August 2010 in the new hall of Bloemhof Girls High School in Stellenbosch.

38 Schools from as far as Lutzville, Bredasdorp and Beaufort West participated. Two schools joined for the first time. 20 Schools were Secondary schools (Gr 8 – 12), six were Primary schools (Gr R – 7), five were Intermediate schools (Gr 1 – 9) and seven were Combined schools (Gr 1 – 12).

All schools were limited to a maximum of 15 projects each. 219 projects were exhibited by 342 participants. 230 (67.3%) of these were from schools in rural areas and 217 (63.5%) of the participants were girl learners.

Number of judges: 96

Number of bronze winners: 65

Number of silver winners: 45

ESKOM WINNING CATEGORIES AND PROJECT SUMMARIES

Eskom Expo best female winner:
Name: Aimee Scholtz
Grade: 10
School: Rhenish Girls High School
Contact number: 021 887 6807 (school)
Project summary: Project was on deterministic chaos and in particular its sensitivity to small changes. This was motivated by issues of climate change. Simple mathematical models were investigated using a computer and also a pendulum. When a system is chaotic it can be described by mathematical equations.
Eskom Expo best development Winner:
Name: Siphusethu Mbuli
Grade: 10
School: Kayamandi High School
Contact number: 021 889 7159 (school)
Project Summary: The effect of caffeine on a person's awareness was investigated by doing various tests to show alertness before and after drinking coffee.
Eskom Expo best Energy winner:
Name: Pierre Schaafsma & Stefan Schreuder
Grade: 11
School: Hoërskool Stellenbosch
Contact number: 021 887 3082 (school)
Project summary: Different trees were tested in various weather conditions and temperatures. The conditions had an effect on the amount of electricity produced. Electricity from trees can be used for low-energy equipment e.g. LED light.
Eskom Expo best Energy Efficiency winner:
Name: Henco Botha
Grade: 11
School: Vredenburg High School
Contact number: 022 713 1151 (school)
Project summary: In this project the participant compared normal bulbs, energy saving bulbs and the latest, new LED bulb with regards to light intensity, energy use and cost. The LED bulb proved to be your best buy over the long term.

Media Attendance: ?

Guest Attendance: ?

COMMENTS:

We suspect that the Fifa Soccer World cup had a definite influence on the number of schools and learners entering Expo this year. Due to the recent strikes 1 school did not turn up at all and 2 schools came very late.

Erika Hoffman
REGIONAL COORDINATOR



SIGNATURE

5. National Finals

6. Marketing

7. International participation

8. General

2010

ESKOM EXPO for Young Scientists National Competition Stellenbosch Region - Results 2010

Category: Energy (alternative, renewable, sustainable)

Henco Botha (Vredenburg High School, Vredenburg) researched LED light bulbs as an alternative to long life light bulbs. He was rewarded with a **gold medal** and was also chosen as **Senior Category winner**.

He has also been invited to the second round of judging for possible participation in one of the **International Expo's** in 2011.

Category: Engineering – Mechanical, Aeronautical and Industrial

Dillon Hopley (Bredasdorp High School, Bredasdorp) designed a chimney that prevents smoke from retracting back into a house. He received a **silver medal** and a special prize:

- **CBI-Electric: low voltage (Mechanical engineering award)**

Category: Food Sciences and Food Technology

Anel Mouton and Simone van den Berg (Bellville High School, Bellville) researched the calcium content of different types of milk. They received **silver medals** and a special prize:

- **SA Association for Food Science and Technology Award – 3rd prize**

Category: Animal and Veterinary Science

Lisa-Mari Bester (Velddrif High School, Velddrif) designed a hoof-spa for the treatment of *Laminitis* in horses. She received a **silver medal** and was also chosen as **Senior Category winner**.

Category: Architecture, Housing, Settlement Studies

Mabru Uys (Bloemhof Girls' High School, Stellenbosch) tested whether north facing houses used less electricity. She received a **silver medal** and was also chosen as **Junior Category winner**.

Category: Environmental Sciences and Ecology

Christoff Geldenhuys (Vredenburg High School, Vredenburg) researched the use of grey water to grow lettuce in pots. He received a **gold medal**.

Category: Agricultural Sciences

Vinzanio Galawe and Calvin Meintjies (Maskam Primary School, Vanrhynsdorp) investigated the effectiveness of technology to prevent predator attacks on livestock. They received **silver medals**.

Category: Animal / Veterinary Sciences

Elisna Dicks and Heléne Booyens (Bloemhof Girls' High School, Stellenbosch) investigated alternative therapies for horses. They received **silver medals**.

Category: Health Sciences and Sports Sciences

Siphosethu Mbuli (Kayamandi High School, Stellenbosch) researched the effect of caffeine on alertness. She received a **silver medal**.

Category: Innovation and Technology

Jason Jordaan and Tian Alberts (Eikestad Primary School, Stellenbosch) investigated solar charging devices for cell phones. They received **silver medals**.

Category: Agricultural Sciences

Carla van Schalkwyk and Madeleine Carstens (Bloemhof Girls' High School, Stellenbosch) investigated the influence of Broiler chick droppings on the growth of *Tilapia* fish. They received **bronze medals**.

ZA Walters (Graafwater High School, Graafwater) researched the viability of using low priced grain as feedlot. He received a **bronze medal**.

Category: Energy (alternative, renewable, sustainable)

Stefan de Wet (Curro Private School, Durbanville) researched underwater wind turbines. He received a **bronze medal**.

Category: Environmental Sciences and Ecology

Samantha Pinto and Fahiema Abdol (Diazville High School, Saldanha) investigated the use of seabird feathers to clean oil spills in harbours. They received **bronze medals**.

Category: Innovation and Technology

Daniël Botha and Daniël Steyn (Eikestad Primary School, Stellenbosch) investigated the use of conducting cables to improve the sound quality of a cordless microphone. They received **bronze medals**.

Category: Plant Sciences

Arrienne Arendse and Eike Davis (The Settlers High School, Bellville) investigated the amount of caffeine found in four different types of tea. They received **bronze**

medals.

Category: Social Sciences

Suemari Bezuidenhout (Stellenbosch High School, Stellenbosch) researched the effect of Baroque music on

9. cognitive functioning. She received a **bronze medal**.

Photos



Stellenbosch organising team



US Rector Prof Botman as guest speaker



In the Sterkfontein caves



Enjoying Maropeng visitors' centre



Mr Eddie Jansen dazzled with his tricks



Stellenbosch national finalists



30th birthday celebrations

