

WASTE

ENERGY

WATER

BIODIVERSITY

Global Change & Green Audit Retrofit Implementation Project for High Schools in Cape Town



ACCESS

Africa Centre for Climate and Earth Systems Science



YOUTH ENVIRONMENTAL SCHOOL



CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

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*“Our biggest challenge in this century is to take an idea that seems abstract – **sustainable development** – and make it into a daily reality for all the world’s people.”*



*Kofi Annan, UN Secretary General,
March 2001*



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Participating Schools

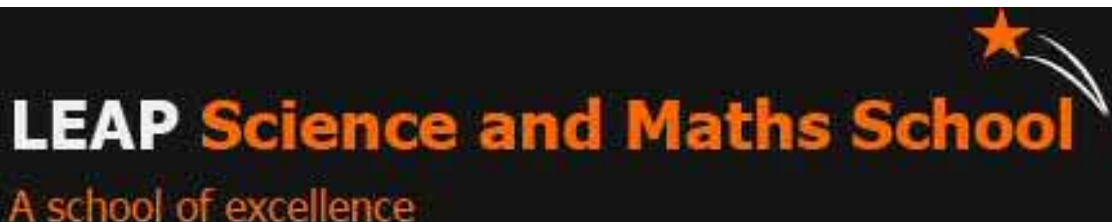


BISHOPS
DIOCESAN COLLEGE



VERITAS

**Hout Bay
Secondary**



Participating Schools:

1. Diocesan College (Bishops) in Rondebosch partnered with
2. LEAP Science and Maths School in Pinelands
3. Springfield Convent in Wynberg partnered with
4. South Peninsula High in Diep River
5. St Cyprians in Oranjezicht partnered with
6. Hout Bay Secondary in Hout Bay
7. Hector Petersen School in Wallacedene informal settlement, Kraaifontein without partner (as Settlers High pulled out)

Background

The Global Change and Green Audit and Implementation schools project is a partnership project between the City of Cape Town and Centre for Climate and Earth System Science (ACCESS).

It is a schools twinning project with an advantaged and disadvantaged school working together. With the aim to match schools which are under-resourced, with well-resourced schools. And it gave learners an opportunity to transfer skills, knowledge and peer understanding. Schools received property guidance and direction from the implementation team.

PROJECT AIM

Establishment of environmental sustainable schools

PROJECT OBJECTIVES

- Establish a green team
- Undertake water, waste, energy and biodiversity audits of school using the Green Audit Toolkit
- Write up the results into a retrofit and implementation plan
- Present the plan to the rest of the school, governing body, parents and project partners and possible funders
- Identify project partners and funders who are willing to help with the implantation e.g. donation of products or funding to buy/acquire the products for retrofitting
- Follow-up audits and maintenance

OUTCOMES

1. Developed and printed the Green Audit Toolkit.
2. Completed Green Audits (water, waste, energy & biodiversity) at each school.
3. Compiled a comprehensive retrofit plan as well as a prioritised retrofit plan.
4. Retrofits completed.
5. Learner outing to Robben Island to say thank you to the learners and teachers.

GREEN AUDIT TOOLKIT

Smart Living Activity Sheets



WASTE ACTIVITY 1: Household hazardous waste audit (page 15)

Go around your house noting down any of the above hazardous materials. Turn to Practical Steps on page 24 of the Smart Living Handbook to explore what alternatives you could replace these with when you next go shopping. The garage and kitchen where you store cleaning chemicals is a good place to start.

Hazardous material	Alternative
e.g. drain cleaner	baking soda and white vinegar

WASTE ACTIVITY 2: Household waste audit

Take a week during which you look at the products that you usually throw away and see what products can be recycled or composted. Keep all the recyclable/compostable products to one side and measure this at the end of the week to determine the volume per type of product. Put your closed recycle carts where there



Learners' Information and Activities Booklet

Global Change - Green Audit Toolkit



School Green Audit : Waste					
Auditor name			Team		
Venue			Date		
Type of waste	Amount of waste	Measuring unit	Recycling potential	Current recycling	Cost for recyclables
Give a short description of the type of waste	Measure the amount of waste	Measuring unit (bag / kg)	Can this be recycled?	Is this currently being recycled?	How much can you make if it is sold?
e.g. cardboard	2	kg	yes	no	R0,25 per kg
Cardboard (K4)					
Electronic/IT					
Furniture					
Glass					
Metal: general					
Metal: tin cans					

Educator's Guide Global Change - Green Audit Toolkit



What is a Green Audit?

Why do a Green Audit?

Why do a Green Audit?

How to conduct a Green Audit

**What does an Green Audit
give?**



Retrofit Implementation

- Areas for intervention:

Waste Minimisation

Energy Efficiency

Water Conservation

Biodiversity Conservation

Waste Management



Energy Efficiency



Water Conservation



Biodiversity Conservation



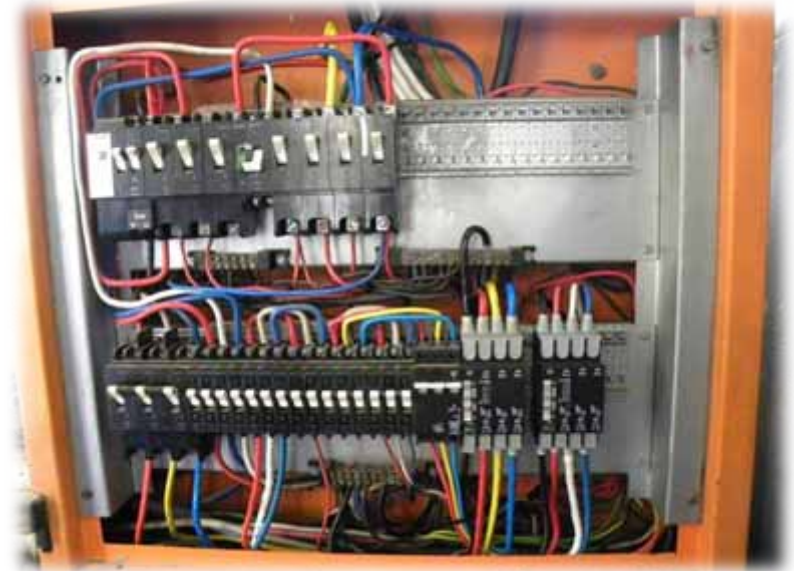
Diocesan College (Bishops)



BISHOPS
DIOCESAN COLLEGE

Electrical sub-metering units

- White House kitchen
- Maintenance yard
- 5 boarding houses
- R30 000



LEAP Science & Maths School

LEAP Science and Maths School

A school of excellence



- Recycling bins
- Worm farms
- Community gardening tools & support



South Peninsula High



- Green veggie tunnel
- Biodiversity garden
- Indigenous office garden



Community food programme



Indigenous office garden



St Cyprians



- Food garden & worm farm
- Rain water tanks
- Drip-irrigation
- Eco-insulation



Rain tanks with drip-irrigation



Spinach harvest time



Springfield Convent



- Geyser insulation
- Geyser timers
- Water efficient showers
- Recycling bins



ROBBEN ISLAND OUTING









Positive outcomes

- Introduced or broadened educator and learner understanding of sustainability and climate change.
- Enabled schools to identify areas of high resource consumption or impact.
- Assisted schools to develop an environmental policy with targets and action plans.

Positive outcomes

- Strengthened existing school environmental programmes and climate change awareness campaigns.
- Created new school “green teams” or reinforced existing environmental groups and clubs.
- Built capacity in educator and learner sustainability leadership in schools.

Positive outcomes

- Gave learners opportunity to understand the business operation and processes of their school.
- Taught learners new skills such as group work, auditing, report-writing, presentation and public-speaking.
- Developed inter-community relations with partner schools.

Positive outcomes

- Enabled schools to raise their green profile and provide support to new and existing community environmental initiatives and legacies.
- Created a platform, programme and mechanism to engage public / private sector partnerships through schools.

Challenges

- Logistical co-ordination and planning with all schools is complex and time-consuming.
- Significant project management and implementation time is needed.
- As an extra-curricular activity, educators and learners have little time.

Challenges

- Dedicated educator leadership critical.
- Hands-on mentorship and personal project support is especially required for poor schools.
- Twinning of schools is highly valuable but difficult to co-ordinate and sustain due to time and logistics.

Opportunities

- Continue to develop next phase of programme for eventual roll-out to all WCape schools and National.
- Refine strategy and implementation model for Phase 4 based on Phase 3.
- Mobilise and leverage public / private sector partnerships under City's Energy & Climate Change Policy.

Recommendations

- Phase 4 roll-out:
July 2011 to Dec 2012.
- Allows more planning for implementation over full school year.
- Invite another 8 schools to participate in twinning methodology.
- On boarding begins July 2011.

Recommendations

Phase 4 to include:

- Engagement with WCED to begin process for integrating with Governing Body Act, Metropoles and Curriculum.
- Goal to prioritise environmental policy, implementation practice and sustainability leadership in schools.

Recommendations

Further ideas:

- Use of “interns” or varsity students to provide extra ongoing project support to schools.
- Select twinning schools in closer geographical proximity.
- Identify a “corporate partner” for each school.

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Questions



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