

South Africa • Longstanding Eco-School members

Special thanks to Alice Surmon, Arefa Haffejee, Nomfundo Ndlovu, Cindy-Lee Cloete, and the Wildlife and Environment Society of South Africa for this contribution

The National Curriculum and Policy Assessment Statement (CAPS) in South Africa shows education for sustainable development is incorporated into the curriculum⁴⁴. Heila Lotz-Sisitka's analysis of CAPS showed "...that in some subjects, up to 50% of content is 'environment' or is related to 'sustainability'; and that environment and sustainability content permeates a wide range of subjects, in line with a curriculum principle that seeks to ensure an environmentally literate citizenry. [...] Because the Department of Basic Education (DBE) is concentrating on improving basic capacity in areas of literacy and numeracy, inadequate attention is being given to this new knowledge area (environmental and sustainable development knowledge) that is essential for improving the quality and relevance of teaching in South Africa"⁴⁵. Therefore, as this environmental content knowledge continues to still be 'new knowledge' for many South African teachers, this has an impact on how environmental education is delivered within the school curricula. There is a need to capacitate teachers with professional teacher development on education for sustainable development.

Programmes such as the Eco-Schools programme are supporting Education for Sustainable Development in the national curriculum. Since 2003, the Wildlife and Environment Society of South Africa⁴⁶ (WESSA) have been coordinating the Eco-School programme in South African schools. The Eco-Schools programme⁴⁷ is centred on

active learning through hands-on action to help promote sustainability in schools and inspire a generation of environmentally conscious individuals.

The two schools featured in this South African Contribution are longstanding members, with Pitlochry primary school establishing as an Eco-School in 2005, and in 2020 Amanzimtoti primary school⁴⁸ celebrated a decade of being an Eco-School. These examples offer up sustainability journeys that started off with a few dedicated teachers and have since grown to a whole school commitment. "The key features of the [Eco-School] programme are that it is holistic and participatory in nature. It promotes whole school development and improvement by educating learners and taking action to improve the environment in both the school and the local community. It is about environmental management and learning in a school whereby teachers, learners and community members get together and undertake a project to improve some aspect of environmental management" (from Pitlochry primary school eco-code).

Contribution (1) by Arefa Haffejee, EcoSchool coordinator at Pitlochry primary school (grade 1-7 government funded public school):

Pitlochry primary school has been working with sustainability-oriented education for the past 17 years. We have been supported by WESSA since becoming an Eco-School in 2005. Valuable resources can be found on their website curriculum links for each theme. This makes it easier for the teachers to complete activities

School garden clean up, learning sustainable solutions, learning from trial and error! / School nature lesson



and incorporate environmental education in the teaching and learning process. We have a very well-established Eco School Policy⁴⁹ at our school. The Eco Committee at

Key WSA Principles in action at *Pitlochry primary school*

Capacity building

- Eco-Schools and WESSA is a main resource for ESD related teacher training and learning materials
- Peer to peer professional development

Vision, Ethos, Leadership & Coordination

- A strong and well-developed vision that the whole school commit to
- Head teacher is very committed
- School has prioritised sustainability and environmental education for over 17 years

Curriculum

- Majority of school subjects include sustainability. For example, learners are taught data handling in Maths using information about recycled materials collected
- Eco-School activities are linked into the curriculum

Pedagogy & Learning

- School uses a cross curricular approach to identify how the relationship between human rights, social justice, inclusivity, and a healthy environment can be emphasised in all teaching

Institutional Practices

- School garden
- Health and Wellbeing measure in place, including sustainable sanitation toilets and healthy eating campaigns
- Constant monitoring and sustainable measures happen at the school and are used as learning opportunities
- Energy key focus of the school - Monitoring electricity consumption. Developing leaders amongst learners and teaching them how to record data with energy checks, and the school makes their own solar electricity.
- Waste is another key focus, recycling and water conserving
- Making of Eco-bricks to build seats for learners to eat their lunch

Community Connections

- Community & Heritage is one of the school's key areas of focus: Giving back to the community, promoting a sense of community amongst learners, making learners aware of their heritage and respecting diversity among learners

Pitlochry Primary plays a key role in achieving this and forms the leadership of our Eco-School Programme. The committee represents the whole school community. Our committee has 3 main purposes: 1. To ensure a whole school approach about caring for the environment; 2. To design programs that give learners responsibilities and promote teamwork; and 3. To develop a structure for the Eco-School Programme.

Currently our Eco School Focus Areas are:

- Community & Heritage – Giving back to the community, promoting a sense of community amongst learners, making learners aware of their heritage and respecting diversity among learners
- Nature and Biodiversity – Redoing the school gardens with indigenous plants to create succulent gardens, creating different ecosystems for learning.
- Health & Wellbeing – Making learners aware of the different food groups to maintain a healthy lifestyle. Helping them to learn to live sustainably. Improving the school toilets for a learners' health and wellbeing.
- Energy - Monitoring electricity consumption. Developing leaders amongst learners and teaching them how to record data with energy checks.
- Waste - Enhancing our recycling programme. Making of Eco-bricks to build seats for learners to eat their lunch. Making of CD string to prevent vervet monkeys from taking learners' lunch.

In terms of Curriculum, Implementation and Monitoring, we link Eco-School activities into the curriculum in different ways. We embrace a cross curricular approach to identify how the relationship between human rights, social justice, inclusivity and a healthy environment should be emphasised in all teaching. Staff continually give feedback and report work completed. Staff also document the process and encourage learners to write short articles for Facebook, the D6 (a school-parent communication platform), and local papers. There are also monthly class progress reports where a Green Award is given to the class who attains the most points for having been environmentally conscious.

Water explorer project



What has changed over the most recent years is that sustainability is now part of most subjects taught at the school. Most of our lessons incorporate environmental education for sustainability. Learners are even taught data handling in Maths using information about recycled materials collected. The Eco-School Programme is linked to the CAPS curriculum in the following ways:

Natural Sciences	Emphasises the importance of biodiversity in life support systems.
Social Sciences	Learners' abilities to identify and analyse a range of environmental and developmental issues is emphasised.
Life Orientation	Emphasises environmental health, and creates links between human health, and creates links between human health and environmental health risks (e.g. water pollution).
Economic and Management Sciences	Sustainable developments and growth, and calls for approaches to reduce waste and protect resources is emphasised.
Arts and Culture	The importance of cultural and natural heritage is considered.
Technology	Emphasises the importance of environmentally friendly designs and encourages learners to investigate technological impacts on the environment.
Languages	Critical literacy skills needed to analyse and address environmental issues and risks is developed.
Mathematics	Develop numeracy skills needed to address environmental issues and risks.

Inclusion: All learners regardless of race, gender, culture or disability are given the opportunity to participate. Learners are given active participation jobs. For example, 'Energy busters' are responsible to check on lights and fans, recycling bins are monitored for good use and all students are part of our whole school recycling efforts to collect bread tags, plastic bottles, ink cartridges and newspapers.

We are committed to, for example; selecting material related to the environment, from the curriculum, and relating this to the eco-school action plan; identifying basic environmental problems and motivate learners to explore and solve them; cultivating individual people's awareness of the environment; encouraging critical thinking; teaching lessons in an outdoor environmental situation; protecting indigenous plants and habitats in the school ground; and bringing about a supportive and democratic learning process in the classroom or learning situation.

Examples of a WSA in action on campus is the newly installed JoJo tanks to flush our toilet systems. These were installed in the new toilet block that was built two years ago. The new block is run on solar power. We plan on using solar energy throughout the school. We have gardens outside classrooms that learners use during natural science lessons to study different ecosystems. Learners make boats with recycled materials and sail them across the pool.

A good starting point for us has been the edible garden. This can be done on a budget, as it can be started using slips or seeds donated by learners. The garden consists of vegetables, fruit or herbs depending on the interest. Another low-cost starting point is to make a 'wormy', or to paint old tyres and plant 'spekboom' plants which reduce the carbon footprint. Also, to use permaculture principles to set up watering systems for the school garden. While expensive to invest in, the solar panels in the new block have been a worthwhile investment as now we still have electricity during load shedding times and lessons continue.

In our experience Primary school learners care about the environment and are willing to help save it. Learners are motivated to collect bread tags to fund the wheelchair campaigns; they participate in the food for needy campaigns and prepare sandwiches for the poor; they are motivated to take ownership of the school's gardens and environment. They are also keen to go on beach clean-ups, nature hikes and learn new skills like how to test river water. Motivated learners motivate others, so this school culture continually develops, and this awareness raising is helped through our assemblies and newsletters. Some projects work and some fail, but if you persevere it works out in the end and you learn through trial and error!

Contribution (2) by Alice Surmon, Teacher and Eco-School Coordinator at Amanzimtoti Primary School:

[Amanzimtoti Primary School](#)⁵⁰ is a fee-paying school based in KwaZulu-Natal with over 700 students from grade 1 – 7. The school follows the national Curriculum and Assessment Policy Statement (CAPS). The language of teaching and learning is English. Afrikaans is incorporated as the 1st additional language. While the CAPS curriculum lends itself to developing awareness in some Grades, this is not the case in all subjects. Therefore, our sustainability education efforts have been self-driven with encouragement from the Eco-Schools programme, and the [One Planet network](#)⁵¹. We have been an [Eco-School](#)⁵² for over a decade, however, over the last 4 years we have intentionally focused on engaging with the most achievable SDGs. Since working with the SDGs our school has had a greater awareness of what we can do to reduce our carbon footprint.

Vision, Ethos, Leadership & coordination • Key to our school's approach is that we have had the support of our School Governing Body in projects we have undertaken, and the Head teacher (Principal) of the school sees the value of Sustainability Education. Each Grade representative educator, and the specialist teachers, fully support the Eco-Schools programme. Through the Eco-School programme, we are also encouraged to develop and adapt our Eco-Code regularly and complete a yearly audit. This helps us to continually reflect on what we have done previously and what we have achieved in the current year. This report is



they shared with the representative team, and they ensure that their Grade tries to achieve a target each term. Each Grade submits their activities on an ongoing basis.

Something successful that was low cost to establish has been our recycling programme for glass, paper, and other materials. We have 28 classes (800 learners), each class has a paper recycling bin which is cleared by the Enviro-Club team on a biweekly basis into the large collection igloos, provided to us by [Mpact Company](#)⁵³. We also collect cold drink bottle tops and bread bag tags as part of a whole school effort to reduce waste and recycle plastic. Funds from these items are used to purchase wheelchairs for those who desperately need them as part of the Quadriplegic Association of South Africa (QASA). The school also supports a local Youth programme – [Indwe Learning Centre](#)⁵⁴ with their requests of yoghurt cartons, bread bags and other items of repurposed waste that they use in their education programme using the Montessori method. Egg boxes are re-used to support our worm farm health, as well as a water retention base for seedlings. We have also taken our excess stock to a local Farmers' Direct shop that obtains supplies locally. Another example is participating in the repurposed and recycled goods craft market last Christmas, which raised funds for the school vegetable garden. Another example of 'ESD in action' are the school vegetable gardens where we use [Permaculture principles](#)⁵⁵. We also have; signage in the bathrooms regarding wise water use; reminder notes by the light switches to encourage thrifty use of electricity; invested in a Solar panel installation to make us less dependant on fossil fuel energy; and the setting up of [Jojo water tanks](#)⁵⁶ to harvest rainwater.

Curriculum, Pedagogy and Learning • There is a lot of support for ESD at our school. Sustainability awareness and knowledge is created through our Life Skills, Social Science and Natural Science curricula, as well as in other aspects of the school curriculum. We have incorporated programmes that are relevant to the curriculum or participated in activities that can be achieved locally or within a reasonable distance from our school. We have walked to our local bird park to find out more about what we have on our doorstep. Our school fields are also fully utilised. The children participate in Beach and Local area Clean-ups. They investigate river quality by conducting Stream Assessment Scoring System ([Mini-SASS assessment tool](#)⁵⁷), in the Technology lessons they have created awareness posters about local Ecotourism, and we encourage healthy eating as a lifestyle choice for the whole school community. We also plant and maintain indigenous trees and plants at the school. Of note though, is while ESD is integrated into all aspects of the school, it is specifically incorporated in the

Students enjoying their garden, a chicken coop was made during Lockdown, two hens are laying eggs every day / Student enjoying 'Lockdown' gardening with grandparents

Enviro-Club extra curricula activities and through this we reach a lot of students. Through the three Enviro-Clubs we run the students and the educators involved are dedicated to the need for understanding that there is no Planet B. Our Enviro-Club teachers design activities that raise awareness of Environmental and Sustainability issues and teach about preserving what we have. Practical activities

Key WSA Principles in action at *Amazimtoti primary school*

Capacity building

- Eco-Schools and WESSA is a main resource for ESD related teacher training and learning materials
- The school also provides venues for workshops both for teachers but also for the local community

Vision, Ethos, Leadership & Coordination

- Head teacher and school management is very committed
- School has been an Eco-School for over a decade

Curriculum

- There are sections that lend themselves to sustainability education but not all

Pedagogy & Learning

- Eco-School activities happen through the Enviro-Club, this is an alternative learning area beyond the classroom

Institutional Practices

- School vegetable [Permaculture](#) gardens
- Health and Wellbeing focus including learning about food security
- Energy conservation is a big focus. Solar panels are also installed. constant monitoring happens through the Enviro-Club initiatives
- Waste is another key focus, recycling and water conserving
- Making of Eco-bricks to give to local building projects

Community Connections

- Community links with various charitable organisations is the biggest link to the community
- Actively engaging with the school's neighbours regarding any concerns they have and utilise their expertise – e.g., one of our local areas is a Bird Park and one of the employees is an amateur ornithologist who has a wealth of experience. He is happy to share with our children and families
- Collaborating with local organisations and businesses, for example a local Adventure Group ran outdoor challenges for the different Grades in the school grounds

also equip the children with skills they will take home to the wider community. For example, will be learning about how to grow our own 'micro greens' from our new Department Head this year – this skill can be used in a limited space.

The portfolio/audit we submit providing evidence of what we have done on an annual basis to Eco-Schools helps us to focus and challenge us to continuously develop and improve on what we have achieved. Examples of theme we work with connected to the Eco-Schools programme include; Climate change; Community and Heritage; Energy; Health and Wellbeing; Marine and Coastal; School Grounds; Waste; and Water; Nature and Biodiversity.

For example, food security has been a focus under the health and wellbeing theme, especially because of lockdown. Families and administration staff have been using the school garden and school grounds to grow food, and students have been learning and sharing various 'lockdown' lessons. One of our learners assisted her grandmother during lockdown at her small farm with growing vegetables, Some other students planted a vegetable garden and built a chicken coop during lockdown.

Another example within the waste theme is the [Ecobricks initiative](#)⁵⁸ - making building materials out of rubbish! We delivered consignment of Ecobricks that we make at school to local projects that are in need of them.

Within the Climate change theme Grade 3 and Grade 6 learners worked together to learn about climate change and an eco-friendly method of cooking – harnessing the energy of the sun. We were visited by Julia, a [Water-Explorer](#) representative (via the One Planet Network) who guided us on the making of our own solar cooker boxes using found materials. The children also sampled a delicious solar baked apple pudding with custard that was cooked while we were making our own boxes. The Grade 6 learners followed up on this activity by baking their own puddings as a group challenge.

Capacity building • In the event of courses being offered – staff are supported and encouraged to attend. For example, the [Clean Surf Project](#)⁵⁹ presented to the whole school about the importance of looking after our oceans. A spokesperson from Clean Surf also spoke at our networking workshop in March 2018 and 12 of our educators were in attendance. We were able to share the contacts of the organisations that support us and others that we support at our workshop. We shared some of the projects we were doing – succulents for Mother's Day, Art – animals made with recycled items. We also hosted an Awards Ceremony in May 2021 – we put together a display of the projects we undertake at the school and an optional walkaround was on offer after the ceremony. We invited other educators from the area that were not currently on the Eco-Schools

Ecobricks



Ecobrick making and collection, an Enviroclub initiative

programme. Another more long-term investment was the professional development I went on as the Eco-School Coordinator. I attended the weeklong Enviro-Education course at an educational facility run by WESSA - [Twin Streams](#)⁶⁰. This course provided multiple insights on various topics such as: purposeful shopping of goods using little or no packaging; cooking and presenting food as economically as possible; auditing water and energy use; exploring local ecotourism ventures; sustainable harvesting of reeds in the wetland in the conservation area; determining the health of our rivers using the MINISASS method – all of which we now apply the Eco-School programme at our school. I also had to submit an assignment on the related work we implemented as a follow-up to the course and afterward shared my insights with the other Eco-representatives at our school. Two educators at our school also attended a session run by Nomfundo Ndlovu from WESSA on plant propagation last year. The school also offers a venue for networking workshops not only for our staff but for the local area as well. We always aim to share the contacts of the organisations that support us and the knowledge they give us to others that we support at our school run workshops. Recently I shared a gardening exercise at a local high school with Grade 8 – 10 learners who attended the interact club (20 learners).

Community connections • We have the backing of our parents with regard to events and activities the school organises and find the parental involvement is a great gateway to the wider community. The school also connects to various community organisations whose need are greater, for example, the Society for the Prevention of Cruelty to Animals (SPCA); less resourced schools (furniture, stationery, books); cancer support programmes; and pone off projects like the wheelchair project where the schools helped collect bottle tops and bread tags to raise money. Another example is the school collaborating with some of the immediate neighbours about greening immediately inside our boundary. Parents have also assisted in providing expertise regarding our Solar Panel project. One of our parents also works for Endangered Wildlife Trust, with particular interest in the amphibians at risk and recently spoke to the children about Ecosystems and the importance of maintaining the balance with excellent

examples (30 learners). Our parents also join us at the Coastal Clean-ups which we do about 3 a year.

Advice to other schools starting out:

- It has been an exciting journey following the Eco-Schools and One Planet/Water Explorer guidelines and programmes. These existing organisations help to develop creative and meaningful ways of encouraging young people to see our local environment as something precious.
- Every little contribution makes a difference. There were times at the beginning of our journey that one felt like a lone voice, but this changed once other teachers came on board to contribute to the programme. Don't be afraid to ask for help.
- Be patient – sew the seed, network with like-minded individuals and dream big. Take opportunities if they are offered. Gain inspiration from others who have a story to tell.
- Stay relevant – add new ideas. Continue to learn and develop as you go along.

Strengths/Prospects (from both schools)

- Teachers are the key to changing the mindset of learners and they can instil good environmental values among learners from a young age.
- Not being afraid to make mistakes and learn from them
- Curriculum does include ESD related content
- Long standing school culture for protecting the environment
- Supportive management

Challenges (from both schools)

- A challenge but also an opportunity for teachers to build up more hands-on experience for learners to understand problems and develop solutions, this provides opportunity to develop problem-solving activities for learners.
- Not all teachers are driven and some focus only on curriculum delivery.
- Teachers need more professional development concerning ESD and connected pedagogical approaches