

A photograph of two young boys, one in a grey hoodie and one in a blue tracksuit, looking at a tablet together. The tablet screen shows a map with the text 'Kelp Forest' and 'Swap the location'. The background is a dark, blue-toned exhibit with a large kelp frond visible.

SAVE OUR SEAS FOUNDATION

SHARK EDUCATION CENTRE

ANNUAL REPORT 2017

Extracted from the Save Our Seas Foundation Annual Report 2017



save our seas
shark education centre





'This type of interactive education is important and will encourage young people to learn and understand more of the magic of the marine ecosystem. I thoroughly enjoyed my time with the team at the SOSF Shark Education Centre.'

Angela Warrior, visiting assistant

2017 was the year that made all the changes we have put into the Shark Education Centre really come alive. We were busier than in previous years, with more and bigger classes of learners coming through the centre, and we were able to make full use of the new facilities and exhibits and start to integrate them in a way that has elevated our educational programming and increased the experiential nature of what we can offer.

Every January, the South African Marine and Coastal Educators Network (MCEN) holds its annual conference. In 2017 it was the turn of the province of KwaZulu-Natal to host the meeting and educator Paul Millar, assistant educator Zanele Mayiya and I attended for the week. The conference took a travelling format this year, with stops at uShaka Marine World, iSimangaliso Wetland Park at Lake St Lucia and Ballito. This was wonderful as it gave us a chance to see a part of South Africa that is subtropical, with warm water, humid air and summer rainfall – quite a contrast to what we are used to in the Western Cape. KwaZulu-Natal also has a very beautiful coastline, while Lake St Lucia is a World Heritage Site.

This week at the conference is always such an inspirational time for us, as we network with other coastal and environmental educators, take on board new ideas and activities, share our own experiences and what we have learnt, and get ready for the year ahead. This year I shared an activity with the group called 'Jellyfish in a Bottle', which is a craft activity that re-uses plastic bottles and grocery store plastic bags and at the same time emphasises the conservation message about plastic pollution in the oceans. Highlights of the week included the first night, which was a sleepover in the uShaka Seaworld Aquarium – a very different experience for all of us! Another highlight was an afternoon cruise on Lake St Lucia, during which we were treated to wonderful sightings of fish eagles, hippos and crocodiles. We unfortunately did not see one of the famous St Lucia Zambezi (or bull) sharks that inhabit the lake, although we looked extremely hard!

I serve as the Western Cape representative on the MCEN's national steering committee, so every year I participate in the national meeting. This

network is an extremely valuable resource and it is an honour to be able to actively contribute to the running of it. As the representative for the Western Cape, I have the responsibility of organising the annual regional meeting and this year the Shark Education Centre once again played host. Held during National Marine Week in October, the conference went very well and the quality and relevance of the invited keynote addresses (on desalination in the South African context and evaluating the impact of environmental education programmes) ensured a very appreciative reception. In fact, so popular were the talks that they were repeated at several other venues at later dates. It was a very successful day and the positive feedback on the proceedings and the venue was very satisfying.

During 2017 the Shark Education Centre played host to a large number of people in the two accommodation bedrooms located upstairs. Except for three days in January, we had guests from 1 January until 31 May without a break and after that we had people staying for a few weeks out of each month. Some of the guests who stayed with us during this past year were Dr Ruth Leeney, the leader of the Save Our Seas Foundation's project Protect Africa's Sawfishes (<https://saveourseas.com/project-leader/ruth-leeney/>) and Peter Musembi from Kenya, the leader of the project Sharks and People of Watamu MPA (<https://saveourseas.com/project-leader/peter-musembi/>). We also hosted Lisa Schroeter, the leader of the ELMO project (<https://saveourseas.com/project-leader/lisa-schroeter/>) that works with citizen scientists to monitor sharks and other elasmobranchs. At the same time we hosted ELMO's Cape Town workshops, which were geared to getting the diving public involved in the implementation of the project. We're very pleased that the accommodation facilities are being so well used.

Another highlight of 2017 was the initiation of a formal assistantship programme, during which Angela Warrior from the UK-based Shark Trust joined the Shark Education Centre team for three months. She not only assisted with the general running and programming of the centre, but also put forward a proposal for an intern programme that could be run from the centre in the upcoming year. She then went on to develop this programme. It was great having Angela here with us to give a different perspective and to input some new and exciting ideas, as well



as to lend an enthusiastic hand. This is what Angela had to say about her time with us:

‘Today’s children are so much more interested in their environment. It is important that the tools and information are available to help them understand how they can reduce the impact of their actions on the natural world. The Save Our Seas Shark Education Centre runs a fantastic programme that covers a whole range of educational activities, including school visits, holiday clubs, environmental camps and in-water experiences for children from informal settlements. The programme aims to instil a love and respect for the ocean and its inhabitants and to teach children how to take better care of their marine environment.

‘This type of interactive education is important and will encourage young people to learn and understand more of the magic of the marine ecosystem. I thoroughly enjoyed my time with the team at the SOSF Shark Education Centre. A model for community-based environmental education, this programme instils a passion, provides tools, develops skills, inspires youth to actively participate in environmental protection and promotes individual understanding of the complex and intricate relationship between humans and the marine environment.

‘Environmental education is a lifelong task, but with more education centres and more dedicated teams like those in the Shark Education Centre, we will create more marine ambassadors for the future.’

Although we had largely finished the renovations at the centre the previous year, there was one element that we were not quite happy with, and that was how to ensure that visiting children (and others) really engaged with every aspect of the new exhibits and signage, and that they connected the storylines that link each area of the exhibits to one another. We also wanted a way to incorporate the floor space of the centre, with all its elements, into the formal programming that we do, rather than just have it offering free time to look around. With that in mind, we approached a company called RetroEpic with a brief to develop a ‘treasure hunt’ app that, utilising augmented reality, would lead players around the centre with mandatory explorations of every exhibit – from the signage to the



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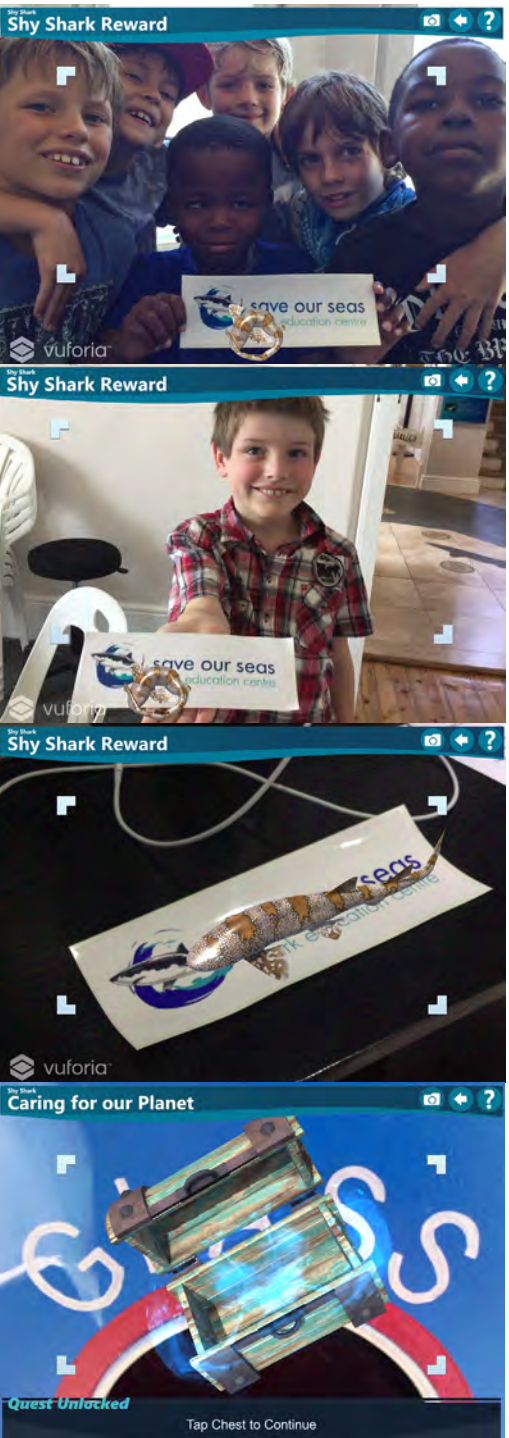


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detailed information within the exhibit itself – in order to earn a reward.

The development of the app took a long time and many very detailed sessions with the RetroEpic team in order to ensure that everything was perfect, from the wording of the questions to the pictures used as clues. Because of the wide range of ages and abilities that visit us here, we developed four different levels, which we call ‘adventures’: Shyshark (foundation phase, grades R–3), Guitar Shark (intermediate phase, grades 4–6), Great White Shark (senior phase, grades 7–9) and Whale Shark (FET phase, grades 10–12 and adults). Each adventure has an increasing level of difficulty and complexity. An adventure consists of six ‘quests’, which are the different areas or themes found within the centre. These are Kelp Forest, Rocky Shore, Sandy Shore, Shark Central, Sharks & People and Caring for our Planet. To unlock a quest, the user has to locate a picture with a clue prompt. This presents him or her with an augmented reality treasure chest that springs open to reveal the five or six designated tasks. After successfully completing all the quests, the user is given a Shark Education Centre bumper sticker, and this in turn unlocks an augmented reality version of that adventure’s name shark, which displays a characteristic behaviour when tickled (the shyshark, for example, curls into a ball and covers its eyes with its tail).

We have finally managed to get the app functioning exactly as we want it to and have tested it on a number of our Holiday Club and teacher groups, with great success and huge enthusiasm from the testers. We have purchased five Apple iPad Air tablets for the centre, pre-loaded with the app, and have put them into extremely robust protective cases. We intend to buy a further five to 10 in the future, as the adventure really only works with a maximum of three children sharing an iPad.

The other major renovation undertaken during 2017 was the replacement of the double garage roof (the garage operates as the ship-themed large classroom). Being asbestos, it was deemed a hazard and was replaced with metal sheeting specially designed to be able to support 57 solar panels, which were installed and fixed to the new roof. These solar panels are photovoltaic and provide electricity for the centre’s operations, reduce our carbon footprint, ensure that we have a



steady supply of electricity and, when we generate more than we consume, enable us to feed back into the municipal electricity grid. Their performance is monitored on our SolarEdge monitoring platform and will in future be displayed in the centre as a teaching tool for sustainable living and renewable energy use.

We continued our formal education programming with school groups in 2017. This year has seen a large increase in the numbers of learners and group bookings – an encouraging trend. The number of groups has increased by roughly 30%, from about 60 in 2016 to nearly 80, and they came to visit the Shark Education Centre for a day out, explore the rock-pools, learn about sharks and discover what we can do to help conserve our oceans and marine environment. The actual number of individuals also increased, from nearly 2,000 learners in 2016 to approximately 2,700 in 2017, showing us that not only did we host more groups, but the groups themselves increased in average size. Notable for the staff has been the increase in our teaching capacity due to the inclusion of our second classroom, which has meant that we are able to double the size of the groups that we can accommodate. Formal groups hosted at the centre have ranged from Grade R through to Grade 12 and beyond to tertiary level. Talks at other venues have reached 750 people.

Our Holiday Clubs continue to be popular and in 2017 registered 156 person days. As has been the case previously, they were fully booked long in advance, with 20 children attending each day. They included such activities as shark lessons, rock-pooling, science experiments, beach hunts, coastal walks, harbour tours, arts and crafts, baking and, of course, a lot of swimming! 2017 saw the continuation of the wonderful collaboration between Shark Spotters and the Shark Education Centre that had begun the previous year, with Shark Spotters running and getting involved in several activities as part of the Holiday Clubs. Targeted direct events in which we participated reached 322 individual learners.

We also continued with our very successful Marine Explorers programme, running two six-month clubs in 2017 with Capricorn Primary School and Muizenberg Junior School, both coastal institutions within easy reach of Muizenberg beach and False Bay. We are so grateful for the wonderful



Photos by Nicholas James Good | Fresh Air Crew

collaboration of our partners in this programme, Xpression on the Beach, University of Cape Town Underwater Club and Pisces Divers, each of whom contributes significantly to its success and to the incredible experiences that the participants have. Following on from the Marine Explorers programme, we once again ran two fully sponsored Marine Awareness Camps at the Soetwater Environmental Education Centre in Kommetjie. We hosted learners from the same schools that took part in the Marine Explorers programme, but expanded the number of participants to 30 learners per camp and provided an immersive and safe three-day outdoor experience for children who might otherwise never get such an opportunity.

One highlight of the year for all staff was the first (of hopefully many!) training session that we facilitated for teachers of the Cape Town Environmental Education Trust. We ran a two-day programme for their field staff and educators, explaining about the ocean and giving them the knowledge they need to include marine elements in their existing programming, as well as ideas for activities and in-field teaching and tips for working with children near the sea and along the coast. We also played some fun team-building games that they can incorporate with their own groups. Another highlight was the 4th Southern African Sharks & Rays Symposium, held in Hermanus this year and attended by some of the staff.

Every year, the December summer holidays in Cape Town are heralded by the Wavescape Festival, a celebration of all things beach, ocean, coast, surfing and sustainability. As one of the sponsors and supporters of this festival, the Save Our Seas Foundation is committed to raising awareness of threats to our oceans and engaging with communities to create a healthy attitude towards sharks. This year, under the Wavescape Festival banner, the Save Our Seas Shark Education Centre team organised an event called ‘Beach Reach’ on Muizenberg beach and worked with 95 inspirational students from the social upliftment initiatives Waves for Change and 9Miles Project to introduce them to the diverse marine life found beneath the waves in False Bay. The fun and interactive activities included making sand sculptures of False Bay sea creatures, a ‘feeding frenzy’ plastic pollution relay race and a marine quiz game. We were joined in this initiative by Surfers’ Pledge

and the We Care Collective, who educated the students about plastic pollution in our oceans and how each of them can help in the war against plastic waste. The Beach Co-op also joined us, donating copies of the book *Seashore* from Creative Nature to the graduating students. It was a wonderful, windy Cape Town day and a lot of fun was had by all.

Towards the end of 2017 we ran an online survey for school teachers to find out where we could improve and what else we could include or do differently to make their experience better – and ended up receiving nothing but extremely positive feedback! Here are a few of the comments we received from teachers who brought their learners to the centre:

- It’s an amazing place of learning to visit with a class of students. Well done on your excellent programme!
- We thoroughly enjoyed our visit and were blown away by your premises and lessons. We’ll be back next year.
- We LOVE Save Our Seas!
- We love coming to Save Our Seas, so will probably see you again next year.
- It’s really well run and the teachers and learners love it.
- Brilliant programme! Keep up the good work.
- The children enjoyed the whole programme.

There is one element of 2017 that has affected not only the Shark Education Centre and its daily operations, but the entire Western Cape of South Africa: an extreme and critical drought. This is due to very low rainfall during the region’s 2015, 2016 and 2017 winter seasons and the steadily increasing demand for water from the province’s rapidly growing population and economy. This, together with climate unpredictability, has placed significant additional pressure on the water supply. By the end of 2017, Cape Town was under level 6 water restrictions, whereby consumption of potable water was restricted to 87 litres per person per day (this has subsequently been reduced to 50 litres); there is a very real risk that Cape Town will run out of water before the onset of the 2018

rainy winter season. At the centre we have had to cut our water use substantially and have done so by collecting all ‘grey’ water, reducing toilet flushing (and using grey water to do this), reducing dish washing, asking visitors to take extremely short showers and to collect their shower water for toilet flushing, and catching as much rain water as possible by diverting downpipes into barrels, buckets and outside sinks. We also plan to install rain water tanks in early 2018. We are proud to say that, since September 2017, we have reduced our water use from a monthly average of 10,000 to just 4,000 litres.

In looking back on the year, I asked the rest of the Shark Education Centre’s team for their personal work highlights in 2017.

‘A highlight of the past year has been the growth in the involvement and commitment of our collaborating partners in the Marine Explorers programme, particularly Pisces Diving and the University of Cape Town’s Underwater Club. The extent to which they contribute to the quality and success of the programme cannot be overemphasised. On a personal level, it has been great to see the development of the youngsters who participate in the programme, which certainly affirms the value of all our efforts.’ – Paul Millar, education coordinator

‘In 2017 a lot happened here at the centre and we have worked hard as a team. I personally gained more experience from the different activities that we’ve done, and I’ve learnt a lot of things from people like Angela Warrior while she was here. I would say my 2017 work highlight was team work.’ – Ntombizanele Mayiya, assistant educator

‘My personal work highlight of 2017 would have to be joining in on the Capricorn Primary Marine Awareness Camp in June. I would say specifically the night hike, where the children got to hike with us along a path and onto a sand dune, to look out over the sea and even see the lights of fishing boats. Being outdoors with kids who never get to do the things my family and I take for granted. Exploring the lighthouse, walking in the bush and even just getting to

play on the sand on the beach – the kids really seemed to enjoy themselves. At the time I felt as though it gave me a fresh perspective on how lucky my family and I are to have access to the outdoors whenever we have free time.’ – Claire-Frances Metcalf, facilities administrator

‘I used to think that my department was the kitchen and cleaning the centre, but as time went on I discovered that we work as a team here. In 2017 I learned to help everywhere and with everything, even with school groups and Holiday Clubs, and with showing the public around the centre.’ – Nosakhele Lillian Ngotshane, housekeeper

And my own highlight? I have to say that I agree with Zanele and Lillian. 2017 was the year of team work for me. It was very rewarding to see the education team pull together into such a cohesive unit, with even Lillian, the housekeeper, and Claire, the facilities administrator, getting actively involved in all aspects of our educational work and not just sticking to their job descriptions. This has helped us become even more effective in striving towards achieving our vision. As Steve Jobs famously said, ‘Great things ... are never done by one person. They’re done by a team of people.’



Photos by Nicholas James Good / Fresh Air Crew

Photos by Claire Metcalf

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Extracted from the Save Our Seas Foundation (SOSF) 2017 Annual Report

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Paul Millar p.5 [top right]

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