

# OUR AHA MOMENTS

Abu Dhabi's Sustainable Schools Initiative



## ABOUT ENVIRONMENT AGENCY – ABU DHABI

Established in 1996, the Environment Agency – Abu Dhabi (EAD) is committed to protecting and enhancing air quality, groundwater as well as the biodiversity of our desert and marine ecosystem. By partnering with other government entities, the private sector, NGOs and global environmental agencies, we embrace international best practice, innovation and hard work to institute effective policy measures. We seek to raise environmental awareness, facilitate sustainable development and ensure environmental issues remain one of the top priorities of our national agenda.

---

# Introduction

The world in general and Abu Dhabi in particular face urgent environmental challenges.

If we are to protect, preserve and sustain our planet, every single one of us needs to take positive action on several fronts. One of the most important - and ultimately most rewarding - actions we can take is to educate our children on the importance of being good environmental citizens.

That is why EAD launched the SSI - Sustainable Schools Initiative - in 2009.

EAD, the Environment Agency-Abu Dhabi, was formed by the Abu Dhabi government in 1996. It is dedicated to protecting and managing biodiversity, providing a clean environment and promoting sustainable development, as well as all aspects of environmental protection, regulation and legislation in the Emirate.

From the outset, we have recognised the enormous value of spreading the environmental message to schools. The SSI is the embodiment of our effort to do that.

Sponsored by BP and launched in partnership with the Abu Dhabi Education Council, the SSI aims to weave the environmental message not just into the schools' curriculum but into every aspect of day-to-day life.

By offering training, guidance, learning materials and practical assistance to teachers and in turn their students, it encourages schools to make a real commitment and real, measurable progress in reducing energy consumption, raising environmental awareness and engendering good green habits to last a lifetime.

Every school in Abu Dhabi is warmly invited to take part in the initiative. A gratifying number have done so – and an astonishing number have gone on to record some truly exceptional achievements.

On the following pages, the schools will tell their own SSI stories, in their own words. All of the data and statistics on the environmental improvements that the schools have made are the schools' own measures. This rigorous reporting is essential to the continued implementation of ever-increasing sustainability best practices. We hope you will find their experiences, their projects, their learnings and - perhaps above all - their enthusiastic commitment as inspiring as we have.

Best wishes,

Razan Khalifa Al Mubarak  
Secretary General  
Environment Agency – Abu Dhabi





---

## A note from the sponsor, BP

As enthusiastic supporters of Abu Dhabi's environment vision for 2030, especially its focus on sustainability, we feel truly privileged to partner with EAD in support of the Sustainable Schools Initiative.

At BP we recognise and share the concerns of the government and the public about sustainability. We believe that this is an important long-term issue which justifies action now and we are wholehearted in our wish to play our part.

We support environmental education for several reasons. We believe that empowering youth with knowledge today will lead them to become more aware of the positive impact they can have on the environment. Support for education programmes has great potential for making a significant impact on the long term health and vitality of the communities where we live and work.

We have been involved with the initiative since its inception in 2009 and are delighted to see how it has grown from strength to strength. The progress has been truly astonishing and is a testament to the will of the people in this Emirate to make changes for the common good. We are thrilled to learn about the great impact the program is having on the schools of Abu Dhabi and how it is making a real difference to the school community.

We are proud to be associated with the SSI, and particularly proud of the Abu Dhabi Education Council and EAD for their tireless and extremely innovative work. Above all, we are proud of the educators, teachers and students of Abu Dhabi schools, for it is they who made this programme such a resounding success.

Best wishes,

AbdulKarim Al Mazmi,  
General Manager and Chief Representative for BP, UAE



# Aha Moment

"Seeing air quality being measured by the mobile monitoring unit made me realise that we're not talking theories, we're talking about actual chemicals and what I study is what is around us! Suddenly, chemistry was connected with real life."



THIS SIMPLE STEP HAS RESULTED  
IN AN ASTONISHING SAVING

49,392

LITRES EVERY SINGLE DAY!

We were one of the original schools invited to take part in the pilot project, back in 2009. It was an exciting but daunting challenge. After all, it's easy to go online and look up statistics about the environment, but it's a whole different ball game to start taking real practical steps to change it!

One student, a member of our first environmental audit teams, put it well when he said: "I thought of the air pollutants we were studying as just words in textbooks. Seeing the air quality being measured by the mobile monitoring unit made me realise that these are actual chemicals and what I study is what is around us! Suddenly, chemistry was connected with real life."

His comment typified the way environmental studies have not just found their way into virtually all aspects of our curriculum, but also become a natural part of our day-to-day existence.

At first, the subject was only of interest to the people in our Eco-Club. Now it has permeated the whole school, so everyone is aware of it – and everyone makes a real effort in their daily life to be a good environmental citizen.

As a great illustration of how it has affected literally everyone, we have to give credit to Sebastian, one of the school's maintenance team. His interest was aroused when he saw the students' efforts to lower the amount of water flushed in the girls' toilets. So he worked quietly on his own to install a simple water saving gadget – which cost just 15 dhs. each – in the cisterns.

This little gadget alone saved around 10,000 litres of water a day, but Sebastian didn't stop there.

With a little research, he found a way to adjust the valve settings in the water cisterns and lower the full tank capacity. This simple step has resulted in an astonishing saving of 49,392 litres every single day!

Flushed with that success, we've gone on from there to start all sorts of initiatives, lowering our energy bills and reducing our own personal consumption of finite resources.

Perhaps our most unusual current project is a mission to save the hammour. This delicious fish is, of course, one of the most popular in the region. Our own survey of local supermarkets found it to be the best seller on all the fishmongers' slabs, despite its relative expense.

But along with the kingfish, it's cited by the Emirates Wildlife Society as the most endangered marine species in our waters.

At present we're only in the earliest stages of our campaign to save it. But since we started to raise awareness, one of our teachers commented: "I didn't know it was endangered. It was my favourite, but I won't eat it again until I know it's OK."



# Aha Moment

**“As with so many things to do with the environment, the main issue was simply lack of awareness. People don’t even realise there’s a problem.”**



After some discussion, we decided that the issue we wanted to focus on was electronic waste. Initially, we saw a campaign from a company about the importance of recycling mobile phones and we were going to replicate it, but then we thought – why stop there? Let’s look at all kinds of electronic waste.

What exactly is electronic waste? As you’ll see if you look it up in Wikipedia, the answer is fairly complex. We defined it as discarded computers, office electronic equipment, electronic entertainment devices, mobile phones, television sets, refrigerators and any other electrical appliance.

In today’s high-tech society, disposing of these things thoughtfully really is a major environmental concern.

So we called our main, flagship project: “My environment is free of electronic waste.”

We felt that the first issue was one of awareness; many people don’t even realise this can be a problem, and think nothing of simply throwing discarded electronics away.

WE’VE COLLECTED A TOTAL OF

6,150 kg

ELECTRONIC  
AND PAPER WASTE

So we persuaded a local radio station to let us talk about it live on air. We also staged plays, presentations and – with the help of Abu Dhabi Education Council - a series of seminars.

We also distributed published information on electronic waste and its impact on the environment, health and safety and the proper methods of disposal. And we launched a contest for local families to raise awareness further.

As well as this main project, we embarked on some other initiatives which are all ongoing, and we think we’ve come up with some impressive results.

We’ve collected a total of 6,150 kgs of electronic, metal and paper waste.

We’ve collected more than 60,000 discarded water bottles in the space of one month.

We’ve reduced the school’s water consumption from 35.8 to 21.5 litres a day, and energy consumption from 171 to 100 MJ a day.

Last but not least, we’ve increased the number of plant species growing around the school from 10 to 21.





## Aha Moment

"Frankly, we were amazed by the enthusiasm. The students didn't just set out to help the environment, they set about building a new one."



After talking about it for a while, we decided between us that the issue we wanted to focus on was land. Living in a desert environment like ours, we're aware that rich, fertile land that you can use to grow and propagate plant life is an extremely rare and valuable asset.

So we decided to really go for it and establish some usable land of our own. The students set themselves the task of actually building a 100 sq.m. nursery in the school grounds. They designed systems so it could be irrigated with the school's waste water.

Quite a few of the children's parents are farmers, so they gave us their animal manure to make fertilizer – which was a good example of recycling, as it might not have been used otherwise.

Frankly, we were amazed by the enthusiasm. The students didn't just set out to help the environment, they set about building a new one.

As a result, the green space in the school has doubled, from 14,763 sq.ms. to 30,800 sq.ms. and the plant species we grow has gone up to 21. Yet we also greatly reduced the amount of industrial fertilizer we buy, because we make our own now.

The nursery has also become a launch pad and starting point for lots of interesting, practical science projects.

These science projects really – and literally – came alive as the students actually saw the plants develop and were even able to touch them.

Some of the students commented that once they'd seen and touched the plants, it was so much easier to recall them vividly when exam time came around.

As far as we know, we're the first school in Abu Dhabi who did this. Achievements are great for any school, but to achieve something that really has benefits like this is just amazing.

THE GREEN SPACE IN THE SCHOOL HAS DOUBLED, FROM 14,763 SQ.MS. TO

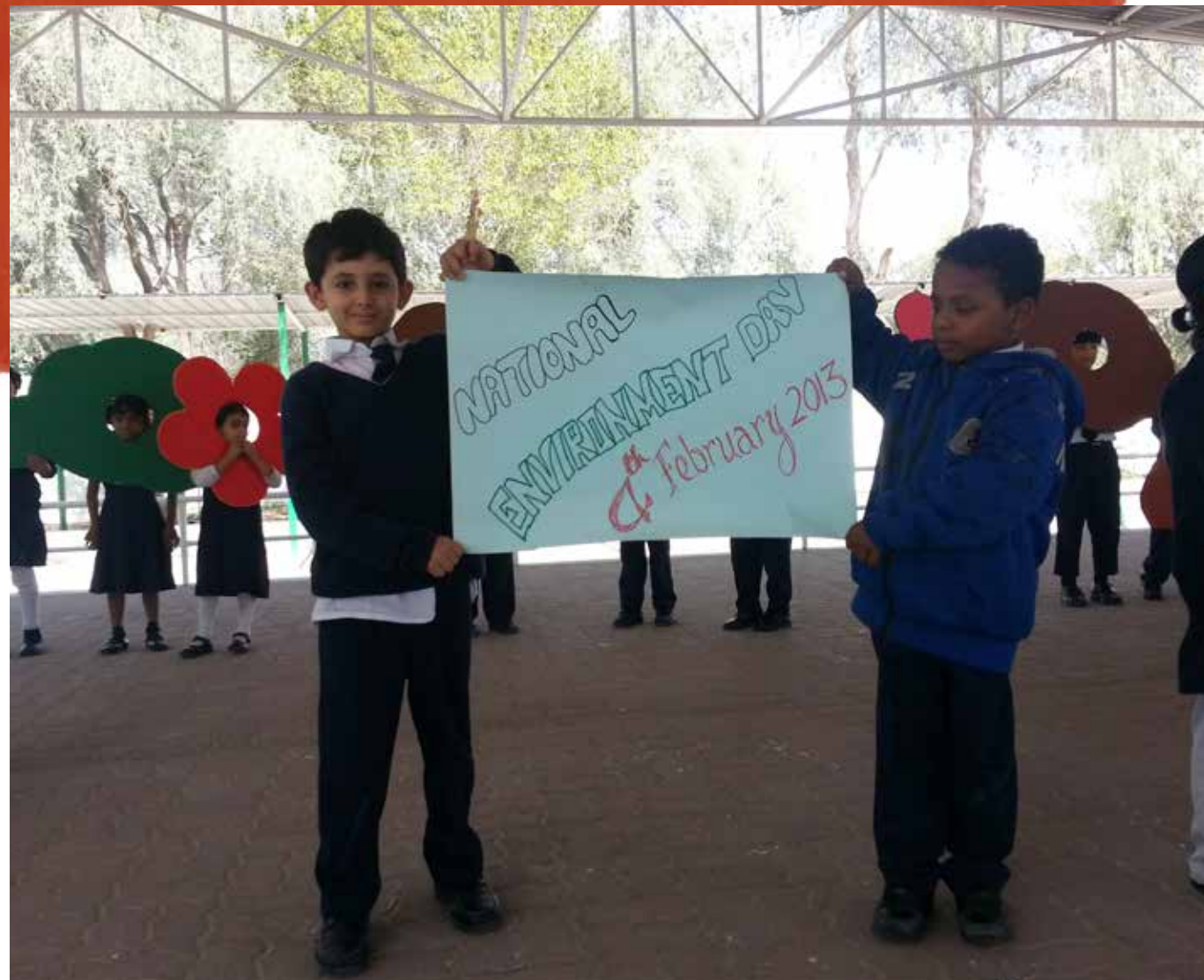
30,800 sq.ms.

AND THE PLANT SPECIES WE GROW HAS GONE UP TO 21



# Aha Moment

"We were glad to find that, even when the momentum flagged a little, EAD was on hand with lots of great ideas to refresh and reinvigorate it."



Our journey started in 2010 when we attended our first workshop on how to carry out a green audit. The training gave us clear information but it must be said that we ran into some difficulties when we tried to put the audit into practice. However, with great support from EAD we worked it out.

Once we explained the notion of the green audit to the students, they took to it with gusto - especially the water audit. A passing visitor might have been startled by the sight of a group of keen students standing round the flush tanks in the toilets, staring at them with fascination and taking copious notes!

The land audit also attracted interest and some great commitment.

One of the students even started coming into school on Saturdays and spending hours collecting data, as he was so absorbed in the project.

Our air quality audit was especially noteworthy as it sparked the students into spontaneous, direct action. The air audit team made a point of visiting the homes of their fellow students, politely explaining the importance of curbing pollution to the parents and asking them to consider sharing their car trips to and from school.

A large number of families accepted this request and now use just one car to carry several students instead of taking them all individually.

To be absolutely honest, after the initial burst of enthusiasm when we started, we did notice that the students' interest dwindled a little in 2012. The teacher-coordinators felt that perhaps they were not reaching the students' hearts.

But we were glad to find that, even when the momentum flagged a little, EAD was on hand with lots of great ideas to refresh and reinvigorate it.

Special occasions like Environment Day, Earth Day and Paperless Day gave the students a great opportunity to re-engage, really feel that they are part of it and take relevant actions that genuinely help to protect our environment.

With excitement re-kindled all round, we were delighted when one of our younger students, Fathima, won a prize for her drawing in the EAD's Annual Environment Competition. Inspired by her win, the whole school is ready to participate when the next competition comes round.





# Aha Moment

"An unforgettable, even traumatic sight for these youngsters was undoubtedly what made them absolutely determined to eliminate plastic waste from our school."



Motivation can come from all sorts of sources, some positive, some negative. It has to be said that the motivating factors that got our students really active and committed were not of the positive kind – but they were certainly effective.

The first big influence on our environmental group, which we called the B-Green Club, was Cameron's Camel Campaign. You may have heard of it; started by a young South African who goes to school in Abu Dhabi, it draws attention to the alarmingly high number of camels who die after eating discarded plastic waste, which they find fatally indigestible. The club members were appalled, but worse was to come.

On a day when they volunteered to pick up waste on the Abu Dhabi shoreline, they came across the corpse of a dugong. We could not be sure but it seemed more than likely that it had died, like the camels, from ingesting plastic waste.

THE SCHOOL HAS NOW  
COMPLETELY ELIMINATED THE  
USE OF PLASTIC WATER CUPS  
FOR COOLERS FROM

1,000

TO ZERO CUPS PER DAY



An unforgettable, even traumatic sight for these youngsters was undoubtedly what made them absolutely determined to eliminate plastic waste from our school.

The school has now completely eliminated the use of plastic water cups for coolers, from 1,000 cups per day to zero. Thanks to vigorous lobbying by B-Green Club members, most students now bring their own reusable water bottles instead of buying them daily. This has reduced the sale of plastic bottles in the school from 120 to just 10 bottles a day.

Because of their efforts, the B-Green Club was selected with a few other pioneering schools to take part in a press conference, announcing the launch of a nationwide campaign to reduce plastic bags. The various Eco-Clubs each presented a speech, project, or sketch on the topic of plastic waste.

The members were thrilled to be at the same conference as Cameron Oliver, who also made a presentation, as his Camel Campaign had been one of their original inspirations.



# Aha Moment

"When people talk about caring for the environment, they usually talk with an eye on the future. But some wonderful lessons can be learnt from looking back to the past."



In the past, the notion of sustainability was basic common sense. If you talk to someone who remembers what the UAE was like before its great modernisation, and you ask them what they did with their waste, they will say "what waste?" because there was no such thing. Thinking about this led us to a profound realisation:

When people talk about caring for the environment, they usually talk with an eye on the future. But some wonderful lessons can be learnt from looking back to the past.

That's why we ran a series of open house discussions, so that old people who remembered those days could share their wisdom with us.

They described how they managed their palm trees in Summer and used every last scrap that comes from it, for building shelters, for weaving baskets, for nourishment. Even the palm seeds were used to make cattle feed.

When it was time to move to the seaside in Winter, they would clean the settlement so thoroughly you would never know anyone had been there, for it was shameful to leave a place dirty.

At the seaside, they dived for pearls, caught enough fish to eat, plus extra fish that they salted to last the whole year. As they said, nothing was ever left to waste.

It was so inspiring to talk to these elders. Then, one of them said something in passing that set us thinking about a very modern application...

An elderly lady mentioned that the shaila, which Arabic women wear, was often useful as it helped them to breathe freely in a sandstorm.

We had been searching for ways to cut our electricity consumption and had discovered that AC units are the single biggest energy consumers, in school or at home. They operate on quite straightforward principles but most of the students admitted they had no idea how they work.

AC units draw warm air in, filter it, cool it and emit it. But if the filter itself is dirty, the unit is not so effective. It has to work harder and has to be switched on longer to achieve the desired temperature. So our students simply set themselves the task of regularly cleaning those filters.

Result: the AC started operating at 15% more efficiency. In a large school with a large number of units, this represents real savings in terms of cost and CO<sub>2</sub> emissions.

Amazing to think that it started with a conversation about a lady's shaila!

THE AC STARTED OPERATING AT

15%

MORE EFFICIENCY



# Aha Moment

**“Our field trips’ function was not just to entertain the students, but to bring them face to face with some important environmental realities.”**



# 250

PEOPLE PLEDGED TO TAKE  
ACTION AND DO SOMETHING  
POSITIVE FOR THE ENVIRONMENT.

Our involvement with the Sustainable Schools Initiative has been centred very much around field trips.

These are, of course, part of life in most schools and are eagerly looked forward to, as they provide a welcome break from the usual routine. But we wanted to ensure that our field trips' function was not just to entertain the students, but to bring them face to face with some important environmental realities.

The field trips enabled them to study the desert environment and get close to some of its plants and animals, to understand the impact of global warming on biodiversity and how it can ultimately bring extinction to some species, how irresponsible factory emissions can result in acid rain, and the disastrous effects that this can bring.

Upon their return from these trips, the students found that the teachers had found ways to link the experience to a range of different educational subjects.

Stimulated by seeing these connections, the students conducted a survey of school students and their parents at home on their environmental habits. They presented the results in an environmental exhibition and, as a novel twist, invited people to make a pledge to commit themselves to change.

A total of 250 people – students, teachers, parents, family and friends – pledged to take action, either inside or outside the school, and do something positive for the environment.





## Aha Moment

"Prophet Muhammad, peace be upon him, taught us that "removing harmful things from the way is charity." We've been trying our best to follow that profound advice."



Thanks to this initiative, we've increased our recycling of plastic waste, brought more greenery to the school and started re-using 100% of our waste 'grey water.' In all these aspects, we actually exceeded our targets by quite some margin and we did it all through one exciting, fun project which we named the Hanging Maalee Gardens.

**The savings on water and plastic waste came via our ingenious drip irrigation system which used plastic bottles that would have otherwise been discarded.**

**We even found a purpose for the plastic bottle caps and managed to re-use an amazing total of 2,064 of them. That's a lot of bottle tops!**

**With the palms, cactus and other hardy plants in our hanging garden growing nicely and even expanding - this year, its coverage has reached more than 1738.56 sq.ms. – we've turned our attention to other campaigns.**

It has been our strategy from the outset to match projects with students' talents and we've tried to establish teams who would be especially comfortable with the specific challenges they're set. It seems to have worked.

For instance, our team who worked on air quality control managed to shrink the number of private cars used for school journeys from 147 to 100, increasing car sharing from 271 to 353 people. And the team that looked at water conservation developed an ingenious irrigation system using over 2,000 discarded plastic bottles.

Prophet Muhammad, peace be upon him, taught us that “removing harmful things from the way is charity.” We’ve been trying our best to follow that profound advice.

Above all else, we've realised that technology, laws and legislation alone will not be enough to bring the sustainability we need, unless they're accompanied by education that instills the right values. Which is exactly what the Sustainable Schools Initiative is providing.

THE TEAM THAT LOOKED AT  
AIR QUALITY MANAGED TO  
REDUCE THE NUMBER OF PRIVATE  
VEHICLES USED FOR SCHOOL  
RUNS BY

32%



# Aha Moment

"We learnt lots of lessons and picked up good environmental habits that will stay with us for life. But perhaps more than anything, we discovered the fun and the power of teamwork."



Instead of zooming in on just one project, we applied ourselves to improve our environmental awareness and implemented energy saving practices right across the board.

Our school is in a relatively isolated area, so transport to and from it is obviously a key environmental issue. We encouraged teachers and students to use the school buses instead of private transport. We went on a local radio station to tell local car users about carbon dioxide emissions.

As a result, our use of shared and public transport increased by as much as 87%. And while that went up, other consumptions went down. For instance, we cut the school's water consumption by more than half.

We organised an energy saving competition between the classes, which taught people the good habit of switching things off when they're not in use, and led to a 30% cut in consumption.

We organised an energy saving competition between the classes, which taught people the good habit of switching things off when they're not in use, and led to a 30% cut in consumption.

We launched an Environment Club, which turned out to be one of the most popular and productive groups in the school. Many of our students have become such good environmental ambassadors, they have taken on the role of trainer for other students and even the teachers.

We learnt lots of lessons and picked up good environmental habits that will stay with us for life. This was partly because our 'train the trainer' leader took the training manuals from EAD and went to great lengths to weave environmental aspects throughout the rest of the school syllabus, so they became a natural part of it.

Our efforts were recognised when we were named as the most sustainable school, after just one year of participation in the initiative. That was a great thrill. But more than anything, the greatest thrill and satisfaction came from students and teachers coming together to discover the fun and the power of teamwork.

OUR USE OF SHARED AND  
PUBLIC TRANSPORT INCREASED  
BY AS MUCH AS

87%



## Aha Moment

"The initiative has turned our students into good environmental citizens. One part of it also turned them into detectives."



We set about improving our environment in several different ways. It may sound simple but we became much more aware of how much waste we generate – and simply being more aware of it meant that we generated less of it.

One particular area where we made savings was with bottled water. Most people have a bottle at school, but quite often they leave the bottle unfinished. We decided to calculate exactly how much we drink and how much gets left behind.

It turned out that we were actually inside the EAD recommended consumption limit. But even so, we set out to see if we could lower it further – and we did.

Bottled water consumption has dropped from 84 to 36 litres a day. The number of bottles with water left in them has dropped from 168 to 72 a day. And we now save the unused water, which amounts to quite a lot, and use it for irrigation.

In addition, we contacted outside contractors who come regularly to take away our waste for recycling. Our discarded paper and wood get re-used and we even get our leftover food taken away and recycled to make fertilizer.

So the initiative has turned our students into good environmental citizens. One part of it also turned them into detectives.

BOTTLED WATER CONSUMPTION  
HAS DROPPED FROM

84-36

LITRES PER DAY

We started an Environment Club and, in the space we set aside for it, the students often noticed an unpleasant odour of gas. Quite independently, they decided to investigate and found that it was coming from the gas bottles used by some nearby restaurants. They weren't being stored and used properly, and gas was escaping.

So we went around and talked to them about the problem, handing out leaflets in Urdu, Arabic, English, Bengali in grocery stores (Bakalas) and restaurants. Students developed flyers about the correct way to use and store gas bottles.

Over 350 people were contacted as part of the awareness generating activity. It turned out that Abu Dhabi Municipality took this very seriously and issued warnings to the restaurants who continued to ignore the advice. Many heeded the advice. Some did not.

In the end, three of those restaurants were shut down by the Municipality. We were sorry about that, but it just goes to show that protecting the environment really is a serious business.

Perhaps above all, the air in Baniyas East is cleaner as a result!



# Aha Moment

"We've found that workshops about climate change, plants, bird watching and fisheries can be combined with teaching subjects as diverse as mathematics and puppet making!"

We were very eager to participate in the initiative, as we'd heard from colleagues at schools in Gayathi and Liwa that it was having a great impact on their students. Our entry was later than we might have liked, as we were in the middle of moving to a new building.

As soon as we were settled in our new home we threw ourselves into all components of the initiative – carrying out environmental audits, starting an Eco-Club, getting teachers involved in the 'train the trainer' programs and organising field trips.

Integrating environmental concepts into the curriculum has been a fascinating experience. We've found that workshops about climate change, plants, bird watching and fisheries can be combined with lessons in subjects as diverse as mathematics and puppet making!



Teachers have been able to adapt science subjects to make students aware of different habitats and biodiversity in Abu Dhabi and beyond. And as well as academic learning, there's also a moral and social aspect in this. For instance, our Islamic Education teachers are able to talk to students about the harm that can be caused by irresponsible environmental behaviour and the importance of sustaining our environment.

Slowly but surely, it all has a good effect. As a small but very practical example, you'll see a lot less waste, especially plastic water bottles, around the school these days.



## Aha Moment

"By working hard to make sure the AC units were as clean and efficient as possible, the number of people in the school who suffered from respiratory ailments dropped dramatically - a very practical achievement"

We were really excited to participate in this initiative. One of our first projects, like many schools, was to aim at lowering our CO<sub>2</sub> emissions by an awareness campaign that coaxed people out of private cars and into shared transport.

With that venture successfully completed, we set out on a bigger campaign which we called “My School Is Free Of Contaminants.”

This involved looking at all the various sources where contamination can come from and cutting it wherever possible. We changed the detergents used to clean the school for more environment-friendly products, and cut down all round on the amounts we used.

We also identified that the school's air conditioning was a major factor in the levels of airborne contaminants. By working hard to make sure the AC units were as clean and efficient as possible, the number of people in the school who suffer from ailments such as asthma fell from 34 to just nine – a very practical achievement!



Then we turned our attention to airborne contamination outside the school. Al Siddique is in Liwa, a strongly agricultural area, and the amount of waste being burned by the farmers presented a real environmental problem.

At some times of year, the haze from the farms could reduce visibility to just a few metres. But an awareness campaign aimed at the local farmers has made an appreciable difference.

Last but by no means least, we've made the school a more green, pleasant and welcoming place by planting lots of local plants. This is also, of course, another effective way to improve air quality. The new green areas are irrigated by diverting water used by the students to perform their wudu procedure before praying.

# THE NUMBER OF PEOPLE SUFFERING FROM ASTHMATIC ATTACKS AT SCHOOL DROPPED FROM

# 34 to 9



# Aha Moment

"We had one of those 'Aha moments' when we realised that we really had to extend environmental awareness out of the school and into the family."



Like most schools who take part in the Sustainable Schools Initiative, we set about saving energy in various ways, monitoring and measuring along the way. We made savings in electricity and we lowered private vehicle use for getting to and from school.

We were amazed at how much water is saved by just going around and repairing leaks and drips, and by simple things like putting bottles into the WC cisterns so they flush with less.

Talking to our colleagues at other schools in Abu Dhabi, we know some of them talk about the 'Aha moment' – the moment when everything suddenly clicks. We had one of those 'Aha moments' when we realised that we really had to extend environmental awareness out of the school and into the family.

So here's how we did that:

We launched the school's very own Green Butterfly Club, which then invited students' families to join in an eco-friendly garden project.



Within the project, participating families switched from irrigating their gardens with conventional taps to a drip system which we explained and helped put into use.

They also use native plant species in preference to imported ones, which means less air miles and less water needed, because the natives are better suited to the ecosystem. And they actively turn vegetable waste, from their own and from neighbouring households, into rich organic compost.

Back at the school, we also started to take more care of indigenous plants by creating a protected area for the ghaf tree and some others.

Finally, simple though it sounds, we make every effort to keep parents and families fully informed and updated on what we're doing for the environment – and how important this is.





# Aha Moment

"It's all about getting down to basics, making small changes that can ultimately make a big difference."



Instead of addressing just one aspect, we wanted to take a holistic approach and see what we could do to be more energy conscious and adopt eco-friendly practices throughout the school.

It was interesting, because once we started to think this way, it led us to ask all kinds of questions and want to find out more. It's all about getting down to basics, making small changes that can ultimately make a big difference.

For instance, we looked at our energy consumption. This prompted us to invite a local company to come and talk to us, both teachers and students, to give us a better understanding of how electricity works.

On a more practical note, they showed us how to read our electricity meters and what the readings mean – something that a surprising amount of people don't know!

This then led us on to contact ADNOC, the people who look after the building, and ask them to fit energy-saving lights. They were happy to cooperate.

Another simple but effective exercise was to lower the amount of diesel our school buses consume. Our students achieved this through a brainstorming process, where they took a careful look at the routes the buses take. They then rearranged them, making some changes here and there to the routes they took, and asking the students to use slightly different pick-up and drop-off points.

These simple steps brought a significant reduction in diesel consumption and CO<sub>2</sub> emissions.

THESE SIMPLE STEPS BROUGHT A SIGNIFICANT REDUCTION IN ENERGY CONSUMPTION FROM

104 MEGA JOULES PER DAY/PERSON

TO

98 MEGA JOULES PER DAY/PERSON

But perhaps our biggest success came when we tackled waste disposal. We began by inviting the Centre For Waste Management – Abu Dhabi to come and talk to us about the issue.

This inspired us to challenge neighbouring schools to join us in a waste-beating contest, which was great fun and very motivating. We continue to encourage other schools to commit themselves to energy reduction and we now have an annual exhibition to showcase what we've done in this respect.

As a result of all this, we've made cuts in our energy consumption, our carbon dioxide emissions and our use of stationery and supplies.

When every school does the same, it all adds up to a really significant contribution to protecting the environment.



# Aha Moment

"Now there are recycling bins in every classroom, segregated according to the type of trash, and using them has become a natural part of everyday life – even for former cynics!"

On joining the Sustainable Schools Initiative in 2012, we opened the Al Adhwa Eco-Club.

One of the club's first projects was to devote playtime periods to more useful purposes. With the slogan "break time is environment time," the members started patrols to pick up litter in the yard, check toilets and sinks for leaks and running water, and switch off lights and AC units that weren't in use.

It took quite some courage to be part of those patrols at first. They came in for a lot of teasing from the other students, who called them 'the garbage gang.' But over time the teasing stopped and now the majority of the students have developed environmental awareness.



Now there are recycling bins in every classroom, segregated according to the type of trash, and using them has become a natural part of everyday life – even for former cynics!

Our campaign to conserve our environment has expanded in several directions. For instance, we have installed thermal insulation and heat-resisting glass film, which reduces power consumption by the school's AC units and we have developed a system for saving and recycling used water from the basins and sinks.

But perhaps our favourite project is outside in our newly created gardens. One of them is planted with vegetables while another is devoted to herbs and medicinal plants.

To reflect the huge number of different nationalities at the school, exactly 55 species have been planted.

Most attractive of all, this project also features an orchidarium and a flower garden, and we are planning to add a butterfly haven.



TO REFLECT THE NUMBER OF  
DIFFERENT NATIONALITIES AT  
THE SCHOOL THEY PLANTED

55

PLANT SPECIES



# Aha Moment

"As well as all its other benefits, it provides an innovative, interesting and very engaging way to think about solving mathematical problems."



Everyone from the school's students to the principal has enjoyed being part of the SSI Initiative.

We called our main project My Air My Health. It dealt with an issue that is especially relevant locally:

How can we get people to stop using their beloved private cars and start using Abu Dhabi's public transport system?

A large number of the students – around 74% - were already using the public transport available to get to and from school. But we wanted to see if we could push that percentage higher.

Simply through an awareness raising campaign by the students, which stressed the need to keep our air clean, we managed to get another 26 to opt for the bus, raising the rate to 78%. But we didn't stop there.

We also staged a targeted awareness campaign, asking drivers of both buses and private cars to switch off their engines while they're waiting. We even provided an air conditioned waiting room where drivers can relax and be sociable, to encourage them to turn off their engines.

As a result, the total amount of carbon dioxide emitted by school vehicles dropped by around a quarter and mileage dropped from 4,345 kms to 4,025 kms.

As an additional benefit, it gave students a practical 'real life' reason to do careful calculations. One of our teachers commented: "it provides an innovative, interesting and very engaging way to think about solving mathematical problems."

Last but not least, to combat prevailing air pollution, we made the school premises a little greener by propagating 300 new plants. Our students have taken part in a number of environmental school trips, where they learn about the natural habitat - in the natural habitat.

These students are becoming real environmental ambassadors, so much so that the BBC featured some of them in a documentary about environmental outreach.

Last but not least, one of our students has been nominated by EAD to take part in the forthcoming, prestigious TUNZA environmental conference.

THE TOTAL AMOUNT OF  
CARBON DIOXIDE EMITTED BY  
FERRYING CHILDREN TO AND  
FROM SCHOOL HAS DROPPED BY

25%



# Aha Moment

"Since taking part in this initiative, our school has literally become a greener place."



Like lots of schools, we made efforts across the board to become more respectful to our environment and our natural resources by raising general awareness and making simple changes. These were all successful.

What's more we ensured that 5,754Kg of pharmaceutical waste was disposed of properly.

The inspiration for this unusual campaign came from an out of date box of pills.

From our own experiences of family life, we realised that many elderly people keep their pills too long, way past their expiry date and even sometimes share them with their friends!

So we decided we could help the local community by offering education on the importance of disposing of medicine properly, and never sharing it.

We visited homes and collaborated with pharmacies to make their customers aware of the issue and we went on to support our campaign with leaflets, presentations and an exhibition.

Our other big success came from another unlikely source – pigeon droppings!

The students discovered that these droppings can be transformed into a rich and very useful fertiliser. So they installed dovecotes to collect it, then recycled it themselves into organic fertiliser and created a kitchen garden.

Each class has its own plot and the garden now provides all manner of fruit and vegetables to the school, workers at the school and needy people in the community around. What's more, we use an water-saving irrigation system and we've planted these new, productive green areas with plants that are suited to the environment as they don't need too much water; plants like figs and henna.

This has been a tremendous, fulfilling experience for all of us, teachers, students and families alike. Our ancestors planted for us to reap and now we're planting for our grandchildren to reap.





# Aha Moment

"The fact is, these days, most people already know about the little steps they can take to help the environment. We wanted to do something that would actually inspire them to start taking those steps."



Although we were aware of our responsibilities towards the environment, we must admit we were perplexed at first about how to start working with the Sustainable Schools Initiative. Fortunately, EAD had all the information, advice and guidelines we needed to get us up and running.

Not long after our involvement started it was time for our annual open day again, which would be attended by all the students and many of their parents.

Our school open days have always been centred around a theme. So it occurred to us, in these times, what theme could be more socially and morally important than conserving our environment? It wasn't a hard choice.

But how were we to present it? The theme, though highly relevant, was a very familiar one to the audience. We thought that speeches, skits or recitals on how to conserve our environment might not hold the audience's attention. The fact is, these days, most people already know about the little steps they can take to help the environment. We wanted to do something that would actually inspire them to start taking those steps.

In the midst of the discussions a student asked, "Why not bring in the culture of India by including dance and music to express our emotions?" That was our Aha moment, the spark we needed.

Everyone wanted to portray the Indian traditions of dance and music and soon ideas started flooding in. Once the plot was set the choreography, rehearsals, and costume designing started.

Finally it was the day of presentation. The dance-cum-drama showed the creation of the natural elements, humans living in harmony with nature, humans becoming greedy and exploiting nature, the slow destruction of humankind, the timely intervention of environmentalists and the restoration of nature. There were also students with banners and posters handing out leaflets within the audience.

All the parents and students agreed it was an inspiring performance.

A tenth grader noted, "Incorporation of dance and music into the performance was a good idea to ensure the audience did not lose interest. It was a feast for the eyes while at the same time it reminded us of our duty towards our environment and warned us not to deplete its resources." Many others were of the same opinion.

We hope that the small steps we have taken will bring to our young students' minds a clearer awareness of nature, its beauty and our role in protecting her splendid variety from which we sustain our life.





# Aha Moment

"Thinking about saving and re-using water was what led us to an 'Aha moment'."

Our SSI journey began in 2010, with the EAD environmental survey. That inspired us to embark on a number of projects.

First of all, by making changes here and there, we reduced the amount of water we use for cleaning the school from 1779 to 1559 litres a month, a saving of 220 litres.

Thinking about saving and re-using water was what led us to what we call an 'Aha moment' – that moment when suddenly everything clicks.

We noticed that large amounts of water come out of the school's air conditioners, especially in the summer when they're working at their hardest. So instead of simply draining it off, we collected this water in a tank and used it for irrigation.

This system can collect as much as 500 litres or more a day! Amazing! What's more, we can use the saved water for irrigation all year round. This project was so successful, we understand Abu Dhabi Education Council has recommended it to other school buildings.



THIS SYSTEM CAN COLLECT  
AND SAVE AS MUCH AS  
**500 Its**  
OR MORE OF WATER PER DAY!

As a result of taking part in the initiative, we're now breeding some brilliant scientists of the future.

Applied environmental science has become a vibrant part of the school's culture and we have several ongoing projects. Right now, our students are working on a totally original system to improve and purify our indoor air quality, and we're all excited to see how it's developing.

The school's SSI coordinator says:  
"Frankly, SSI has changed Al Resalah School's whole way of thinking about the environment, so environmental awareness among the students is now a natural daily practice."



# Aha Moment

"Sometimes there is very little difference between a learning curve and a tough, uphill slog. But the satisfaction you feel when you overcome problems and get on top of them is wonderful."



It would be tempting to gloss over the difficulties we had when we first got involved with the Sustainable Schools Initiative and started our Eco-Club. But the truth is, it wasn't easy at first.

Teachers and students both had fairly low awareness of environmental matters. Some of the teachers were concerned about how to incorporate environmental activities into the syllabus and worried that the core curriculum might suffer.

The students weren't terribly enthusiastic about our first project, which was to carry out a full-scale audit of our air quality and energy consumption. So we had difficulties in getting commitment from them to carry it out. Then we had practical problems in doing the audit, so a lot of the results we first came up with were flawed.

But then, over a period of time, the project began to gain momentum. The kids got interested; more and more of them started asking about our field trips. The teachers found creative, innovative ways to weave the environmental activities into everyday learning. And between us, we identified and ironed out the glitch that was hampering our auditing process.

Sometimes there is very little difference between a learning curve and a tough, uphill slog. But the satisfaction you feel when you overcome problems and get on top of them is wonderful.

And after such a bumpy start, you can imagine how thrilled we were when we won a Best Waste Management award.

The self-generated idea that led us to pick up that award was straightforward and effective. We simply colour coded our waste bins so the different types of refuse



could be segregated for more efficient recycling. The students all took this on board and separating waste – which is an excellent environmental habit – now comes as second nature to them.

And our activities have continued apace. We've run numerous campaigns, staged puppet shows, put on dramatic mime events and hosted workshops, all aimed at constantly raising environmental awareness, in and around the school.

It's safe to say that concern for the environment is now part and parcel of our students' lives.

None of us who were there will forget the moment when the youngest tot in the nursery class started talking about the importance of energy conservation!



# Aha Moment

"Highlights of our current activities include a campaign that encourages supermarket shoppers to take their groceries home in the used cardboard cartons that every supermarket has in abundance, instead of plastic bags."

When it was launched in 2009, our Eco-Club had few members. But as days passed by, new members started to enrich it with their valuable ideas, and get simultaneously rewarded through the Club's continual progress, organized plans and firmly established goals.

As it built momentum, the Eco-Club started on a number of projects that have literally transformed this place of learning.

Our 'green walls' feature hanging gardens that charge the atmosphere with life and vibrancy, providing oxygen and purifying the air.

Now, part of our electric lighting, water heating and air conditioning are solar powered. And the school's 'grey water' is collected and filtered to be used for irrigation.



OUR GREEN WALLS REDUCED  
THE COOLING REQUIRED IN  
SOME AREAS OF THE SCHOOL  
BY AS MUCH AS

20%

As a result of our efforts, the school was invited to take part in the World Future Energy Summit 2010, with our Grade 12 students delivering a presentation entitled "Save Water, Save Energy."

But we haven't sat back and rested on our past achievements. Highlights of our current activities include a campaign that encourages supermarket shoppers to take their groceries home in the used cardboard cartons that every supermarket has in abundance, instead of plastic bags.

We also produce a regular magazine, produced by students, which is all about recycling and has proved extremely popular.

According to the students' feedback, the experience of envisioning a dream, imagining it coming to life, then working hard to make it come true, is a profoundly constructive experience that has added depth and richness to their lives.



# Aha Moment

"One of the most interesting things about our participation: it changed students into teachers."



One of the main recommendations of the Sustainable Schools Initiative is to start an environmental club in the school. We did that straight away. It was while talking and brainstorming at the club that we had one of those 'Aha moments,' when you stumble across a really strong insight:

In general, young people instantly understand the need to take care of the environment. They don't need any persuasion. The people who do need some persuasion are more likely to be the parents. And they're the ones who make the decisions.

So a total of 80 students vowed to turn their parents into good environmental citizens who really do make a contribution.

They set up a scheduled series of meetings and workshops with all the mums and dads, which raised awareness of the issues and their importance, and gave practical advice on how to lower any household's energy consumption and environmental footprint. And this was not just addressed to parents; if they had people who helped them run the household, we made sure they were included.

The result was 100% successful. Every single one of the student-targeted households achieved lower energy bills. So they were saving money as well as saving the planet!

In addition, we've made cuts all around the school on our electricity and water use, as well as our food waste. And we've also enabled over 700 students to go on vitally useful educational field trips.

THE RESULT WAS

100%

SUCCESSFUL - EVERY ONE OF THE TARGETED HOUSEHOLDS ACHIEVED LOWER ENERGY BILLS





# Aha Moment

"The Eco-Club decided to run an awareness campaign on the subject of trees. The big problem was, how do we get people engaged and enthused? That's when one of the Grade 9 students had an Aha Moment and came up with a wild suggestion: how about running a tree election?"



We'd like to talk about an 'Aha Moment' – that moment when everything suddenly clicks – that we enjoyed a couple of years back.

In that year, the Sustainable Schools Initiative had chosen local trees as a major theme for learning and exploration. We had a well established Eco-Club by then, and the members did a survey of students' knowledge of trees that are native to the UAE. It has to be said that the results were fairly dismal; knowledge in general could hardly be lower.

The Eco-Club decided to run an awareness campaign on the subject of trees. The big problem was, how do we get people engaged and enthused? That's when one of the Grade 9 students had an Aha Moment and came up with a wild suggestion: how about running a Tree Election? And thus the NIMS Tree Election took root.

Here's how it worked: a day was selected when the higher secondary students gave a Powerpoint presentation on the trees that grow naturally in UAE. Later that day Eco-Club members went from classroom to classroom, talking about the importance of trees and the need to protect them.

The students were then invited to select four species as candidates for election to the rank of most popular local tree. The winning candidates were the ghaf, sidr, tamarisk and the fig tree.



A group was formed for each tree and, just like a real election campaign, they went round the school, extolling the virtues of their tree.

On the day before the Eid holiday, election day dawned. It began with a sapling being passed from hand to hand from the principal to the gardener, who planted it. The students also made a vow to look after all trees and promote their growth wherever they could.

Then came the big moment, when it was time to vote. Many of the students had got so swept up in the excitement, they brought their own placards to school in favour of their chosen species.

Finally, the winner was announced. The species that was chosen as the winner was the simple ghaf tree.

When cynics talk about environmentalists they sometimes dismiss them as "tree huggers." Well, here at our school we are tree lovers – and proud of it.



Once the filtered water reaches a certain level, it is automatically pumped through to irrigate the school's green spaces. As a result of having so much water to feed on, those green spaces have increased enormously and are growing beautifully.

Instead, each student has their own jute bag – which is completely recyclable, of course. To eliminate further we've also set strict guidelines on what children can bring with them to school along with their books: it's limited to a lunch box, a handkerchief and a water bottle. Aluminium foil is banned too, so packed lunches have to be wrapped in something that can be reused or recycled.

EAD has recognised our efforts with a number of awards, for good management of waste, water and land. But the greatest satisfaction is seeing how our students are maturing and growing into truly environment conscious citizens.

OF GREY WATER PER DAY WHICH  
IS THEN FILTERED AND RECYCLED





# Aha Moment

"As one of the teachers put it: According to Islam, wastage of anything is forbidden. So as an Islamic teacher I want to do my best to convey this message to my students."



Getting involvement and commitment from teachers and students has been, it must be said, a fairly gradual process. Because we use the CBSE curriculum which places great emphasis on academic theory, we have also encountered had some difficulties in weaving the concepts of environmental studies into it, as they are much more practically based.

But we can now safely say that, since our first participation in the initiative in 2009, environmental awareness has definitely established a presence in our school.

Recycling is a natural part of our daily routine and we have even picked up a couple of accolades for our environmental efforts, which gives us enormous encouragement. Another factor that prompts us to 'think green' is our location. We are right in the middle of the Mussafah Industrial Area which, as you can imagine, needs all the greenness it can get!

In fact, cleaning up Mussafah has been the focus of a lot of our efforts. Though bins are provided in abundance, we noticed in our early days that an awful lot of waste was simply being dumped on the roadside. The students took the initiative by sending a report to a local newspaper which sparked a clean-up campaign in the area.

The students kept track of this process but, sadly, they saw that the situation was not improving – waste was still being dumped at will. This time, through the SSI Coordinator, they voiced their concern to the Abu Dhabi government's customer care centre.

WE HAVE COLLECTED WELL OVER

8,000 kg

OF PAPER FOR RECYCLING

The response was immediate. Inspectors visited the school and the students showed them the affected areas. A while later there was another visit from a government representative, but this time they came especially to thank everyone for their good citizenship.

Paper recycling has been another major project. A recycling contractor was contacted and we set out on a paper collection drive, creating a competition with prizes for the classes who brought in the most. In the first month, 1,000 kgs of paper was sent for recycling and we have now collected a total of well over 8,000 kgs.

The teachers too got into the spirit of it and really played their part. As one of the teachers put it: "According to Islam, 'wastage of anything is forbidden.' So as an Islamic teacher I want to do my best to convey this message to my students."

When every school does the same, it all adds up to a really significant contribution to protecting the environment.



# Aha Moment

"The students are now more aware and caring in every way. They even guide and encourage each other to treat the environment with respect."



The most gratifying and inspiring element of our involvement with this initiative has been the enthusiasm of the students. They have been brilliant!

They were asked to utilise every spare page of their notebooks, instead of starting new ones for every new term. The students responded wonderfully, giving their old books a fresh look and using them again. Now they are fully immersed in the habit of recycling paper that they would have thrown away in the past.

In fact, you can say that the students are now more aware and caring in every way. They even guide and encourage each other to treat the environment with respect.

The single most magnificent response came when we set about making our school a greener place. At the outset, there was no greenery here at all, so we started a garden, planting hardy, native species like acacia, neem, date palms and eugenia.

We wanted to use the school's 'grey water' to irrigate the garden. We're still working on it, but because of the distance from the water source and a general lack of resources, we haven't been able to achieve it yet.

So the students and teachers came up with the idea of collecting the water from the AC units. Now they collect it on a daily basis and carry it in old buckets, paint pots and whatever else they can find to feed the garden.

The lessons learnt from this exercise have led to a campaign that we call 'Save Water Save Life and Save the World'. It could be seen all over the school and every single person, teachers and pupils alike, is fully aware of the importance of water conservation.

And our garden has got the benefit of it too. Fed and watered every day by those diligent students, it is growing beautifully.

The total green area when the school started the project was zero. Now we have grown it to a total of 1441 sq ft – an achievement we can all be proud of.

OUR GREEN AREA HAS INCREASED  
FROM ZERO TO A TOTAL OF

1,441 SQUARE FEET



# Aha Moment

"When we went on stage to receive our prize from HH Sheikh Mohammed Bin Zayed Al Nahyan, we simply cannot forget the moment when he said "thank you" to us."



Our SSI journey began in 2008, and the first project of our Eco Club, which we named Nishargo, was to bring life to a barren, open field that was part of the school grounds.

Planting grass and trees improved air quality and increased our green area straight away. But at the same time the students took care not to use extra water for watering. Instead, with help from the school authorities, they channelled the "grey" ablution water to our Eco Club garden.

As our trees and plants grew little by little, transforming the landscape, we thought of further actions to reduce our carbon footprint.

We made an audit of the energy consumption in the school and replaced the existing lights with energy efficient bulbs, reducing our energy usage by 15%. Yet this was just one of the actions

that made our principal encourage us to apply for the Zayed Future Energy Prize in the Global High Schools category.

To our extreme delight and excitement, when the finalists were announced we were one among three in the Asia region. From there we went on to be declared the outright winner!

On the day of the awards ceremony, when we went on stage to receive our prize from HH Sheikh Mohammed Bin Zayed Al Nahyan, we simply cannot forget the moment when he said "thank you" to us. In that brief moment with him on the stage, we could see the spark in his eyes exuding his vision for the country and for the world, his commitment towards the legacy of Sheikh Zayed's vision for environmental sustainability, and his empathy towards the common man.

Being a school in the UAE, we felt especially proud to win this international award which has been founded in the name of Sheikh Zayed.

Since then, we have gone on to make our school a more environmentally sustainable place in lots of different ways. As a major part of that, we have installed solar panels on the roof of the school and, since September 2013, solar power has been used for our lighting, fans and computers.

We know that this is only a beginning. We have miles to go and many more new projects to challenge.

One very exciting project which is now absorbing us is to introduce passive cooling, using traditional Arab techniques and architecture.

WE REPLACED THE EXISTING LIGHTS WITH ENERGY EFFICIENT BULBS, REDUCING OUR ENERGY USAGE BY

15%



# Aha Moment

"The students had some ideas for saving water that weren't just brilliantly simple – they were also simply brilliant."



Great thinkers from Leonardo da Vinci to Isaac Newton to Albert Einstein have all told us that the simplest ideas are the best. It was advice that we were careful to bear in mind when we decide to tackle the challenge of cutting the school's water consumption.

So we began, simply enough, by finding out exactly where all our water goes. It was very revealing! We used relatively little for watering our greenery and in the school canteen. About twice that amount went on cleaning around the school. The biggest area of consumption by far was in the school bathrooms, which used 10 times more than was used in cleaning.

The next step was to focus on the bathrooms and find ways to reduce the water use and recycle the water that was consumed.

The students had some ideas for saving water that weren't just brilliantly simple – they were also simply brilliant. They came up with the main idea with no prompting from the teachers – and they derived it from what they had learnt in geology lessons.

Instead of being drained away, water from each wash basin drops into a bucket containing a layer of sand and a layer of gravel. This filters the water and renders it clean enough to be used safely for irrigating our gardens and green areas.

We also made two more simple but effective steps: we put water bottles in the bathroom cisterns to reduce the amount that is stored, then flushed – something that everyone really should do.

And when they had nearly finished a bottle of water, instead of just dumping, we got the students to get into the habit of throwing the last bit of water onto a plant that would benefit from it.

The results of these steps have been impressive!

Total consumption per day is now less than half the figure we first recorded in our audit, dropping from 16,436 to 7,193 litres. And because of our recycled 'grey water' from the bathrooms, the use of water for irrigation has plummeted from 631 to 222 litres a day.

OUR DAILY WATER CONSUMPTION  
HAS DROPPED BY MORE THAN

50%



## Aha Moment

"Our campaign, which asked grown-ups to give us their electronic waste instead of simply throwing it out, netted a total of over 600 kgs, all of it suitable for recycling."



THE CAMPAIGN BROUGHT IN A  
TOTAL OF

600 kgs

OF ELECTRONIC WASTE  
WHICH WAS THEN SENT FOR  
RECYCLING

Throughout the first year of our journey with the Sustainable School Initiative, we discovered that values, attributes and mindset shifts need to be ingrained in a school's culture and way of life before any meaningful change can occur.

Organic growth cannot be rushed, so we let our eco-projects develop and consciousness grow at their own pace. We built experiences for students to take part in, such as energy audits, water testing, waste stream analysis and a composting project.

The students who entered into these activities enjoyed them; they were practical, engaging and educational. By word of mouth, the interest level started to climb. With the full support and encouragement of the teachers, the students themselves started to take the initiative, maintaining proper records and updating themselves with new procedures and techniques.

This growing awareness, we believe, goes even beyond environmental issues, vital though they are. By learning and appreciating the value of interdependence, teamwork and initiative, students are better able to understand and implement decision-making in the future.

One of the major milestones in our growth was when the school's Eco-Club members met to decide on a new project that the whole school could get involved in. Several concepts were floated, discussed and rejected.

Then one of the members came up with the idea of a program to collect electronic waste and recycle it. It was our Aha moment!

Our research among 700 parents and teachers showed that the vast majority of electronic waste – defined as any electronic item or product that is no longer used or usable – is simply thrown away in the garbage. This is dangerous because it often contains toxic elements and also extremely wasteful because there are often parts that can be easily reused.

Our campaign which asked the grown-ups to give us their electronic waste instead of simply throwing it out brought in a total of over 600 kgs, which was all sent for recycling.

It was a really proud moment when inspectors from the Abu Dhabi government took a look at this project, praised it highly, and said there were a number of aspects of it that had not even occurred to them!

In the wake of this and other ecological projects, the environmental attitude of our students has undoubtedly improved. As a natural part of their daily lives, they follow eco-friendly practices like waste segregation, avoiding food waste, and reducing their use of plastics.



# Aha Moment

"No wonder we were very keen to be part of the Sustainable Schools Initiative when we heard about it!"



Our school is in Ruwais, which is a centre for heavy industry. There's a major oil refinery, a fertilizer plant and a sulphur-handling terminal not too far away. We recognise that these are all great for Abu Dhabi's prosperity but we're also naturally concerned about the impact they might have on our environment.

No wonder we were very keen to be part of the Sustainable Schools Initiative when we heard about it!

You won't be surprised to hear that we chose clean air as our main focus. We adopted a simple idea: to ask students and their families to make Sunday and Tuesday a car-free and bus-free day. There were special rewards for students who committed to the initiative.

We've been working on it for three years and we're glad to say it's working. Over the first two years, we saw carbon dioxide emissions from vehicles fall from 43,240 g/km to 26,653 g/km on our clean air Tuesdays. And in the third year they dropped to just 16,230 g/km on that day.

One thing our students did, which worked really well, was to ask motorists in their cars to just switch it off for one minute and think about the difference it made to the air.

They were surprised at first but we think most of them got the message!

We also tackled the clean air issue - and made the school more green and pleasant - by increasing the landscaping around the grounds from 27 m<sup>2</sup> to 67.4 m<sup>2</sup>. And we increased biodiversity by planting lots of new species of plants. The species count jumped from seven to 23.

Another of our big wins was to lower our water consumption massively. At the start, it stood at 61.2 litres a day. Now the daily total is down to just 21 litres. That's a difference!



WE HAVE REDUCED CARBON EMISSIONS OF VEHICLES IN OUR AREA BY

27,010

G/KM ON CLEAN AIR TUESDAYS



# Aha Moment

"These weren't just school field trips. They were journeys of discovery."



Like most of the participating schools, we set out on a variety of projects that were truly fascinating learning experiences and genuinely worthwhile too, because they brought real savings.

We've recycled more waste and we use much less water as a result of the initiative.

But in our opinion, one of the most positive benefits was that it made us think in a different way about one of the standard features of school life – the field trip.

Like nearly all schools, we run several trips a year and it's fair to say that they are primarily for entertainment and a pleasant break from the usual routine.

But it occurred to us that we could link our trips to important environmental issues, so the children could see at first hand what the problems are and what the solutions can be. As a result, these weren't just school field trips. They were journeys of discovery.

We took it a stage further by directly tying the trips into the school curriculum. So as well as learning about the environment and ecology, students learned things that were relevant to their studies in mathematics, biology, geography, geology and Arabic.

It's been hugely successful and every bit as popular. Last year, 630 students took field trips, yet there are only 546 in the school! So it's clear that these trips are making many of them want to come back for more.

FIELDS TRIPS HAVE BEEN HUGELY SUCCESSFUL, LAST YEAR ALONE

630

STUDENTS PARTICIPATED IN OUR FIELD TRIP PROGRAMME





preserving our heritage • protecting our future



