



**Global Environment
Centre**

SMART Ranger

 **Start Managing All Resources Today** 



reduce, reuse, rethink, recycle, compost, close the loop

The Pilot Project

This pilot project for SMART Rangers was taken up by Sekolah Kebangsaan Sri Kelana, Petaling Jaya, Selangor. Students and teachers were selected by the school and taught the importance and benefits of recycling and composting. They were extremely enthusiastic about the programme, and on 26 September 2004, the first SMART Ranger group in Malaysia was formed in SK Sri Kelana, consisting of 4 teachers and 17 students.

They conduct weekly collection of recyclables on Fridays and have arranged many talks, demonstrations and competitions in their school to raise awareness about the environment to their fellow students and teachers. They also promote eco-friendly products such as pencils, colour pencils and files made out of 100% recycled newspapers. They have also been invited to participate in many exhibitions and events to promote recycling to the general public.

Today, they continue to collect over 15,000kg of recyclables annually and raise a considerable amount of money for the school's extracurricular activities. Their group now consists of over 20 teachers and 60 students, and is a true success story.



The very first SMART Ranger club in Malaysia.

Below: Cikgu Ong (coordinator) with SMART Rangers in action.



Left: Dr. Wong Sai Hou, Faizal Parish (GEC Director), and the Ex-Head Mistress of Sri Kelana making good use of the recycling bins in SK Sri Kelana during the launch of the SMART Ranger club.

What is SMART Rangers?

SMART (Start Managing All Resources Today) Rangers is an Environmental Education Programme for school communities to learn about the environment with a focus on natural and non-natural resource management in Malaysia. The SMART Ranger Programme initially began with a focus on solid waste management, where GEC managed to develop a proper system for a recycling programme.

Where it all began

The concept of SMART Rangers came about during the three-year Kelana Jaya Lakes Rehabilitation Programme where three working groups on pollution reduction, rehabilitation and education came together to work with the community in achieving a better environment.

This soon led to a School Environment Education Programme where one of the main activities were Environment Education Camps where students could learn more about the environment and its management. There was also a clear focus on solid waste management in Malaysia, which was seen as a major environmental issue.

From there, Global Environment Centre saw the potential of proper education for school children on solid waste management and decided to develop and initiate the SMART Rangers Programme with an objective to train students and teachers to be 'recycling experts'. Support for this project came from the UNDP-GEF Small Grant Fund and DANIDA in 2004.

Why?

At present, there is a lack of information, knowledge and education for the general public to take action on solid waste management issues. The local government is currently spending up to 40-70% of taxpayer's money annually for solid waste management alone, and is facing considerable problems with the rising amount of waste that the nation is producing. Less than 5% of all waste is being recycled, when up to 70% can actually be recycled or re-used in some way. In general, the average individual Malaysian is producing up to 2kg of waste per day with a per capita generation rate of 1kg/day. Our landfills are reaching their maximum capacity in the near future, and the government is looking into building incinerators to cope with the waste generation.

Proper education on the issues and how to manage solid waste properly for our younger generations can help to build a greener nation - one that is conscious of solid waste issues, and how to manage their waste responsibly.

Objectives

- Create and enhance students' awareness on managing their resources
- A way for them to contribute to environmental well being
- To teach them the importance of reducing their waste and recycling
- To initiate a systematic and scheduled recycling programme for the school
- To help generate revenue for classroom activities
- To set-up a Recycling Collection Centre, where possible, on the school's ground



Approach

Global Environment Centre prides itself in being the first to introduce the concept of 'Civic Science' as a way to approach community participation in river management. The concept means to bring thoughts about issues from the mind down to the heart, by giving the people the awareness, knowledge and, most importantly, skill to take action on environmental matters.



The SMART Ranger Programme

Establishing a SMART Ranger Programme involves a 5-step process:

Step 1: Selection Process

Each school will select 2-4 teachers and 20 students to participate in the programme. In a community or organisation this can involve parents/leaders and children.

Step 2: Support Group

Once the core members have been decided, they must set up the SMART Ranger club under their school's Nature or Science Club. This group will then have to set up a small working committee. Support from the school management and PIBG is important to ensure that the programme gets full cooperation from everyone.

Step 3: Training

The selected students and teachers will be trained by GEC or SMART Ranger Teachers based on training modules prepared by GEC.

Upon completing the modules, they will be given a certificate of recognition and they will be fully certified SMART Rangers. They will be responsible to train their fellow students in resource management and how to reduce waste production and waste management. They will take the lead in initiating a recycling and composting programme in their school.

Step 4: Action

The SMART Rangers have to pre-fix a date for collection by Alam Flora or any other vendor/contractor and start sorting and collecting recyclables from the school or from their own homes, with the support of other students, teachers and school communities. The items should be stored in a recycling centre or store room under the management of the SMART Rangers.

From here, the SMART Rangers have to discuss on an action plan for the year - how are they going to use the money? What activities should be carried out? And how can they involve the whole community? They also have to prepare a regular summary report for GEC on their collection quantities and activities, which will also be highlighted on their own SMART Ranger blog prepared by GEC. GEC endeavours to keep monitoring the school's progress, and encourages all SMART Rangers to also think BIG, and participate in global events such as Clean Up The World which is a global initiative to get everyone to participate or organize a clean-up of their local environment.

Brief Outline of Module Contents

The SMART Ranger Programme involves theory and practical training in solid waste management. There are 4 training modules, which teach students about the current status of solid waste management in Malaysia, and give them the knowledge and skill about how to manage their waste responsibly in their daily lives as well as in their schools.

Module 1: Solid Waste Problems and Issues

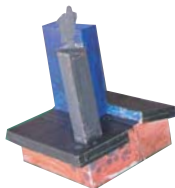
This module concentrates on the facts and figures and the environmental issues we are facing today due to improper solid waste management. What are the main sources of pollution and what are the effects of pollution?

Module 2: Solid Waste Management

What is the proper way to handle solid waste? This module teaches students on the correct way of managing our resources through the Integrated Solid Waste Management concept, which involves acquiring the knowledge about the kinds of waste we produce and learning how to manage them properly through a comprehensive concept, 4R2C, which is Rethink, Reduce, Re-use, Recycle, Compost and Close the loop.

Module 3: The Art of Recycling

Students learn about the theory behind art of recycling - how to sort out recyclables, or make use of them in nature craft, and the recycling process from collecting to selling.



**nature craft
made by students**

Module 4: Hands-On Training

Here, the students observe demonstrations on how to recycle and get to put what they have learned into practice. Students are given the task of sorting recyclables and managing them correctly. They also have to create a nature craft piece to demonstrate how items can be re-used and made into useful things again.

Upon completion of the modules, the students will be awarded a SMART Ranger certificate, which validates them as official SMART Rangers. From here, they will form their own SMART Ranger Committee which will work on initiating a recycling programme in their school, and training their fellow students on proper resource management. There are also 2 other certification schemes - Guru SMART Ranger and Sekolah SMART Ranger, which recognize SMART Ranger Teacher Trainers and schools that practice the SMART Ranger Programme. The SMART Ranger Teacher certificate is only valid for 2 years and will receive renewal based on the depth of their involvement.

The SMART Ranger Programme is seen as an avenue for students to generate their own income to sustain the activities of the club or other school/classroom activities. It will also enable them to encourage their neighbourhood, friends and families, to take part in the recycling programme by donating their recyclables to the school and therefore achieving an environmentally-conscious neighbourhood.

Protectors of Mother Nature

Following the success of SK Sri Kelana, other schools have stepped forward, inspired and motivated to do more to contribute to the health of our environment. As of 2006, over 30 schools have completed the SMART Ranger training and are currently running sustainable recycling programmes in their schools. The outstanding ones are SMK Teloi Kanan, Kedah, Garden International School, and the SMART Rangers of Perumahan Awam Bukit Kiara.

Eager Groups

GEC is always more than happy to train or educate anyone who is interested in saving our Earth! Since the programme began, GEC has been invited to participate in numerous exhibitions, events and talks regarding solid waste management, in which we also invite any SMART Rangers nearby to participate in as well. GEC is also involved in corporate/company training and was invited to DENSO's Safety, Health and Environment Week to set up an exhibition, as well as to give a talk on the importance of proper solid waste management. GEC was also invited to a side event about recycling at the Sustainable Management Conference 2007, organized by the Malaysian Environmental NGOs, to present a talk on the importance of recycling.



Fun & Games

Our presence at such events has also led to the creation of special environmental games for children and adults alike where they can learn about the environment and resource management while having fun! Some of the games include a Smart Shopper game, where they can learn about how to buy more environmentally-friendly products according to their packaging; a Recycling game where they learn how to sort and recycle; Nature Hunt, where they have to search for recyclables, or perform certain actions like crushing a bottle at different checkpoints, and a Crossword Puzzle, where they have to answer questions related to the environment and resource management.

Website

SMART Rangers have the opportunity to post their collection data online on their very own blog that is prepared for them by GEC. Each active school is given a page of their own to post their data as well as information on any of their upcoming activities. This is an important tool to motivate the students and give them a sense of pride that their information will be out there for everyone to see. It will also allow members of the general public to view their page and hopefully inspire them to either contribute to the school's recycling initiative or start their own!

Making Headlines

The media has taken interest in the efforts of these schools to promote and practice recycling. These are some of the articles that have made headlines in the national newspapers and children's magazines.

Events 11
TUESDAY 4 October 2005 Metro



Dr Wong presenting the Smart Ranger certificates to the students while headmistress Rohayah Mohamad Sarif looks on.

School marks 'Smart' anniversary

By K.W. MAK

THE SMK Sri Kelana Smart Ranger programme celebrated its first anniversary recently with Karangkrak and Kitar Buana coming on board as sponsors for the project.

"Smart" stands for "Start Managing All Resources Today", and the recycling programme involved four teachers and 17 students when it was initiated in partnership with Global Environment Centre (GEC) and the Petaling Jaya Municipal Council (MPJ).

It now has the support of 23 teachers and 37 students.

"When we first started, my friends and I were treated as replacement workers for Alam Flora," recalled student leader Ahmad Huzairah Abdul Ghani, 12.

Aside from helping the school raise about RM300 a month from the recycling activities, the students and teachers have also come up with brochures, a website and murals on the school walls that promote recycling.

GEC programme co-ordinator Suzana Mokheri attributed the success of the project to the dedication and commitment of the teachers and students, adding that GEC had merely acted as an adviser and provided ideas.

Officiating the ceremony was Kampong Tunku assemblyman Datuk Dr Wong Sai Hou, who is also the MPJ environmental committee chairman.

He said MPJ had pledged to provide a trailer cabin so that school could store the recyclables away neatly.

Recycling campaign a success



Some of the campaign participants.

GARDEN International School (GIS) has completed its SMART Ranger training with Global Environment Centre (GEC), after a successful campaign which saw the secondary school reducing, re-using, and recycling waste.

The school began their SMART Ranger training with GEC's Senior Programme Officer Dr Kaithasan recently with 18 secondary school students and two dedicated teachers.

Since then, they have organised numerous projects within the school to raise awareness about

waste and recycling.

To note is their recent Green Day event where students came donned in green and were encouraged to bring in recyclables from home, and bring their own food containers to school in an attempt to reduce waste.

The canteen also stopped using Styrofoam containers.

In less than two months, they have collected 657kg of newspaper, 115kg of used paper, and 1,300 plastic bottles.

They are also collecting aluminium cans and plastics for recycling.



SMART Renger SK Sri Kelana

SMART (Start Managing All Resources Today) Renger SK Sri Kelana merupakan kumpulan pertama yang diwujudkan di Malaysia di bawah pengendalian Global Environment Centre (GEC). Kumpulan tersebut ditubuhkan pada 26 September 2004 dengan sempena pelancaran program kitar semula SK Sri Kelana. Pada ketika itu cuma

empat orang guru dan 17 pelajar yang menyertai kumpulan tersebut.

Kini SMART Renger SK Sri Kelana mempunyai 37 pelajar dan 23 orang guru termasuklah kakitangan sokongan dan wakil Persatuan Ibu Bapa. Kumpulan tersebut merupakan sebahagian daripada pendidikan program kitar semula di bawah Projek Pemuliharaan Tasik Kelana Jaya, Local Agenda 21 Petaling Jaya.

Tujuan penubuhan SMART Renger SK Sri Kelana adalah untuk mewujudkan alam sekitar di kawasan sekolah yang bersih dan selesa sebagai satu proses pengajaran dan pembelajaran. Selain itu, sebagai cara mencari sumber pendapatan tambahan kepada sekolah dan melahirkan warga sekolah yang sayangkan alam sekitar. Paling penting ialah setiap pelajar sekolah hendaklah mempunyai tanggungjawab dalam hal-hal penjagaan alam sekitar dengan cara mengitar semula barang terbuang seperti kertas, tin, kaca, plastik dan sebagainya.



How do I start at home?

Recycle - Separate Your Waste

Pick out and separate the recyclables according to their categories. Then,

- send the recyclables to the nearest Recycling Centre; or
- put them into the recycling bins found in your neighbourhood; or
- put them neatly outside the house for the trash collectors. They will know what to do.

For information on location of recycling bins & collection centres, visit www.gecnet.info.

Reuse Old Things

Instead of throwing them away, try to reuse as much as possible. Donate old clothes and old toys to welfare homes and charity organisations. Plastic bottles can be cut and used as garden pots.

Reduce

Refrain from buying items that are packaged in non-recyclable materials. Don't ask for plastic bags the next time you go shopping. Bring a bag with you.

Rethink

Before you purchase your next item, ask yourself, "Do I really need this item and what do I need it for?" Spend wisely.

Start Composting

Vegetables and fruit peels, used tea leaves, grass clippings and tree trimmings can be composted at home

How do I start at school?

Be a SMART Ranger.

Start a Recycling Programme at your school.

The Global Environment Centre has a Recycling Programme to train students to be SMART (Start Managing All Resources Today) Rangers.

For further information on the programme, please contact the Centre.

Recycling Programme

Which route would you choose?



It's your choice. Do the right thing.

For further information, please contact:
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RECYCLE
to ensure our future

Start from home today!

Think Globally, Act Locally.

Global Environment Centre Danida



Do you know?

Every year, in Malaysia

- over 80 million aluminum cans are being used;
- 300,000 kilograms of newspapers are published;
- 28 billion glass bottles and jars are thrown away.

Everyday, Malaysians generate more than 15,000 tonnes of rubbish. This is expected to increase by 2% every year.

This will have a very adverse effect on the environment. If we want to keep our environment clean, we must learn how to manage our wastes.

Let's start the habit of recycling before it is too late!

IMAGINE

If we, Malaysians do not recycle, within 10 days the waste that we produced can fill up a large and tall building like the KL TOWER.



Recycling one glass bottle saves enough energy to light a 100-watt bulb for 4 hours!



What is recycling?

Recycling turns materials that would otherwise become waste into valuable resources and in the process, generates a host of environmental, financial and social benefits.

WHAT CAN BE RECYCLED?

Here are some of the common household waste that can be recycled.



Why recycle?

Saves Natural Resources

Reusing discarded products and using recycled materials to make new products reduces the use of raw virgin materials, which often involves cutting down trees and mining the earth. Every ton of steel produced from recycled materials saves about 1,200 kilograms of iron ore and 450 kilograms of coal.

Saves Landfill Space

Less landfill space is required when we recycle our waste. Finding a suitable landfill site is not easy. There are various social and environmental factors to be considered for e.g. pollution and environmental care. With the enormous amount of waste we throw away each day, we may soon run out of suitable landfill space.

Saves Our Environment

Recycling reduces environmental damage caused by mining, logging and manufacturing raw materials.



Saves Disposal Cost

Recycling reduces the amount of waste we need to dispose into landfills. It reduces transportation cost and the cost of setting up more landfills.

Saves Energy

Tremendous energy savings come from using recycled materials instead of virgin materials in manufacturing. Using recycled materials means there is no need to spend energy to mine raw materials, transport them to factories and process them.



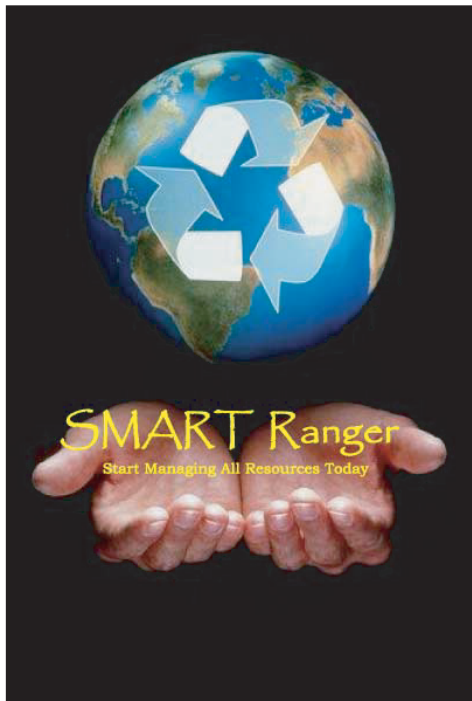
Reduces Pollution

Almost all manufacturing processes use and release a lot of water and chemicals, as well as emitting pollutants into the air and the environment. Using recycled instead of raw virgin materials generally cuts down on the manufacturing process and help to reduce pollution.

Good Business

Recycling saves money for manufacturers and their customers. It is also good for the economy as it helps to create jobs for engineers, general workers, machine specialists, environment personnel and others.

Let's work together for a better world!



Certificate of Membership

This is to certify that

from

is a member of the

SMART Ranger Program

under Global Environment Centre's
Environment Education Program



Left: SK Sri Kelana SMART Ranger Uniform and Perumahan Awam Bukit Kiara launch of the SMART Ranger club.



Bottom right: SMART Rangers @ Clean Up the World 2006



