S-IN650-11-GR-026

BRAKE EVEN
2011 – 2012
FINAL REPORT

CONTEXT

Young learners today grapple with a wide array of academic disciplines at school. These disciplines, no doubt, broaden the cognitive and academic horizons of the youth, but overlook several other aspects of learning. Their environmental and citizenship values are neglected. These skills may not be tested in important examinations, but are critical for a meaningful life as a responsible citizen and professional.

This is where Brake-Even stepped in and offered a profound yet fun way to develop these important values and issues. Brake Even is Swechha's innovative short-term outreach programme for schools and other educational institutions eager to engage with issues related to Environment and Citizenship.

The American Centre supported the Brake Even programme in 15 schools in the year 2011 – 2012 under the IVLP Gold Stars programme. The Grant was given to IVLP Alumni Vimlendu Jha for Swechha to widen the outreach of the existing programme to more schools.

OBJECTIVES

1) To break out of the monotony of text books and learn about critical environmental issues through games, exercises, worksheets and films.
2) To give a wholesome learning experience to students through the combination of fun, action and learning.
3) To help students connect with and appreciate aspects of their natural and social environment.
4) To inspire students to take positive action and contribute as active global citizens and environmental stewards.

TIMELINE OF THE PROGRAMME

Tie ups with 15 schools of Delhi - Private and Government schools.	July 25 2011 - November 2011
Collating resources (Films, worksheets, games, etc)	July 2011
Brake Even Workshops (15 workshops)	July 25 2011 - June 25 2012

THEMES

1. WATER - importance, access, pollution, conservation
2. WASTE – waste generation - quantity, types of waste, waste disposal, waste management

METHODOLOGY

Brake-Even sessions were

- Intensive 2-2.5 hour workshops
- Designed for small groups, ideally not more than 40 students per session.
- Interactive in nature and encouraged active student participation.
- Planned with innovative aids like games, films, videos and audit tools.
- Supplemented with creative resource material

Each session followed a similar format –

1. Ice-breaker
2. Game to trigger thought on issue
3. Film screening for awareness
4. Connections - Small group discussions and presentations by the children to build understanding on the issue
5. Action points – what can we do?
6. Audit tool (Water / Waste)
7. Video/Music

	WATER	WASTE
2	**Game** - First word association on Yamuna / Daily use of water sheet / story (Who owns the water?)	**Game** - Needs and Wants
3	**Film screening** - Jijivisha	**Film Screening** - Wasted
4	**Connections!** River - Habitation River - Livelihood River - Economy and Industry River - Politics and Development River – Ecology River – Religion River and Us	**Connections!** Change in patterns of waste generation – quantity and quality Waste – Economy Waste – Ecology Waste management Waste and Us
5	**What can we do?** Spread Awareness Campaign Conserve water	**What can we do?** Reduce waste Re-use what we can Recycle what we can Separate waste
6	**Tool** - Water Audit Tool	**Tool** - Waste Audit Tool
7	Pyaasi (video of song by Swaraatma)	Animated clip

IMPACT

SCHOOL	STUDENTS	TEACHERS	THEME
Spring Dale, Pusa Road	35	2	Water
Apeejay, Sheikh Sarai	37	2	Water
Mothers' International	36	3	Water
Delhi Public School, Vasant Kunj	40	1	Water
Frank Anthony Public School, Lajpat Nagar	40	2	Water
Banyan Tree, Lodhi Road	40	2	Waste
Modern School, Barakhamba Road	40	1	Water
Akshay Pratishthan, Vasant Kunj	45	6	Waste and Water
St. Colomba's, Gole Market	25	4	Water
Kendriya Vidyalaya, Vigyan Vihar	80	4	Water
Kendriya Vidyalaya, Chhawla Camp	60	1	Water
Kendriya Vidyalaya, Rangpuri	45	2	Waste
Akshar School, Kolkata	40	4	Waste
Kendriya Vidyalaya, Sainik Vihar	50	3	Water
Bloom Public School, Vasant Kunj	40	4	Waste
15 Schools	**653**	**41**	

OUTCOME

The Brake Even workshops were successful in

- Bringing critical environmental issues to the classroom
- Increasing understanding on these issues by integrating textbook and other knowledge
- Identifying a role for the self in these macro-issues
- Encouraging creative thought on the issues
- Inspiring action on these issues

The success of the programme can be measured not just in terms of the number of students it affected but the increase in awareness and change in mindset that it caused amongst these students. This is reflected in the feedback received.

FEEDBACK

The Workshops have been received well by the schools and especially the students. The students were from middle and senior school. In many schools, it was the Eco-club which was selected for the session. In others, it was a selection of students who were then entrusted with the task of telling the other students about the issue. Most schools wanted the workshop for more children and some (especially the Kendriya Vidyalayas) insisted we do very large groups as their children do not get such opportunities often.

The interactive media and tools helped students understand and assimilate the facts quickly. The films and videos had a deep impact on the children. The sessions were lively as children participated with questions ranging from religious practices that affect rivers to role of rag pickers in our society. The postcards were also appreciated.

The feedback also reflected the resolve of the children to do something about what they were learning.

'It was a great pleasure to be a part of this session. This session helped us to understand the value of a river which actually means a lot to us. Living here in Delhi I will give my best to encourage everyone I know about saving the river…I won't be one of those to pollute such an important and beautiful part of the city!'

Mansi, Kendriya Vidyalaya, Vigyan Vihar

Recently, a workshop was conducted in our school on the condition of the River Yamuna. The NGO showed us a video on the condition and the water of the River Yamuna. The river is being worshipped in the Himalayas and when it flows down to big cities, waste is dumped making the river dead. Now there is no life possible in the water of river. So "SAVE WATER SAVE LIFE"

Jitendra Jindal & Nikhil Puri, Bloom Public School

The students learnt about the entire route of the river Yamuna and how it is getting polluted. The group activities, interaction among the students and the facilitator were effective in building up interest and awareness in students.

Ms. V. Kaur, (Teacher) Mothers' International School

The workshop changed my mind. It was really interesting and sad because of the amount of garbage we create.

Shiv Menon, Akshar School

FOLLOW – UP WITH SCHOOLS

The Brake-Even programme, supported by the American Centre has helped widen outreach and interaction with different kinds of schools in Delhi. It also encouraged teachers and students in these schools to participate in other awareness and educational programmes or conduct campaigns in the school.

At Mothers' International, the students put up an exhibition in school highlighting the issues of river pollution and relating it to the problem of clean drinking water. The children also took part enthusiastically in the first ever Yamuna Cyclothon organized by Swechha in January 2012. A group of St. Columba's students also took part in the same. St. Columba's has also initiated modules on the environment with its Eco-Club with action projects for the children to initiate in their school premises.

Springdale School, Pusa Road organized a Yamuna Walk for the students which was an 'eye-opener' for the students. Delhi Public School Vasant Kunj and Modern School Barakhamba participated in Project Y, on the banks of the river Yamuna.

Akshar School has created a compost pit in the school garden while the Nature Club is also working on reducing waste in the school.

The programme was hence able to reach out to many students, help them connect with their natural and social environment and inspire them to initiate action for this environment.

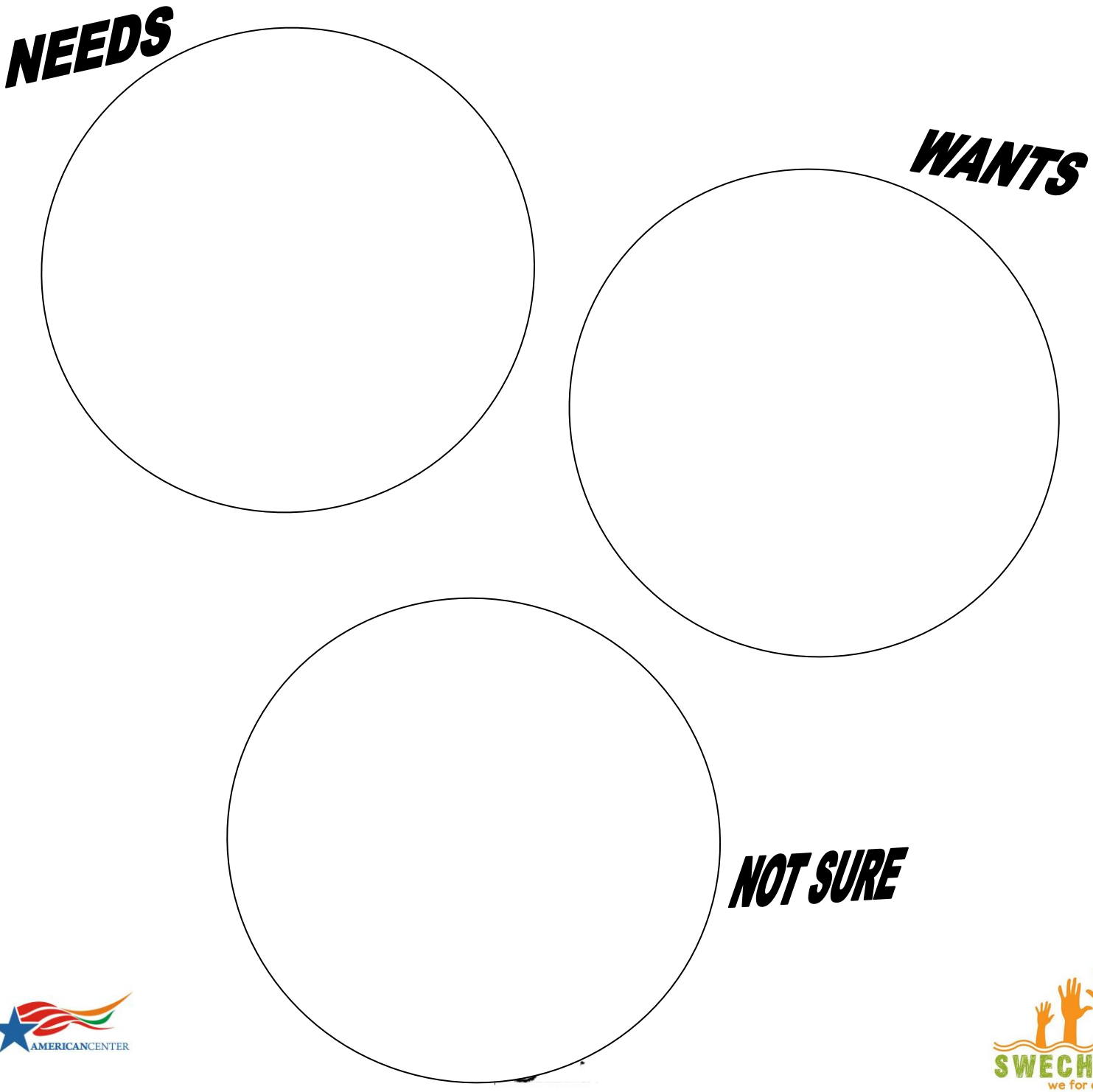
CONCLUSION

In an education system which often restricts learning to rigid structures and syllabi, programmes like Brake Even encourage interdisciplinary and experiential learning. They make critical issues simple to understand and encourage environmental stewardship and active citizenship amongst young people by making it possible for the students to take action on these issues.

ANNEXURE 1
WASTE

NEEDS VS WANTS

Think about what things are necessary for your day-to-day existence. Take a look at these pictures and write their names in any of the three circles made below. Think carefully - Why do you feel these things are necessary? What things do you want? Why do you want these things? Are any of your wants also needs?



ANNEXURE II

WASTE AUDIT TOOL

WHAT IS A WASTE AUDIT?

A waste audit is a hands-on activity to characterize the types, quantities, and origins of the waste generated in the school. It is a method of determining how much paper, food, and other materials are discarded in the school waste stream. The waste audit presents a qualitative (visual) and quantitative look at materials in the school waste that can be reduced, reused, and recycled.
The aims of this waste audit are:

- To bring about awareness and an understanding of the types of waste produced by the school.
- To measure and record waste streams in their classroom
- To help students understand the relationship between people and the environment by recognizing the consequences of their choices on the environment.

WHAT WASTE? HOW MUCH WASTE?
The waste produced can be divided into 3 major types:

Recyclables:	Materials / waste which can be recycled into products or elements again – either by us or as it goes for disposal.
Organics:	Anything made out of natural r bio-degradable material
Garbage:	What is neither organic or recyclable

Waste generation
The first step is to look at the type of waste generated and do a "waste Inspection" of your class. Physically sort and identify each waste component and calculate its percentage in the waste stream. Calculate the waste generated over the week.

(*Kindly use proper safety equipment like gloves or masks while performing the waste inspection. Ask your science teacher for help wherever needed*)

Waste	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Weeks Total**
Garbage							
Recyclables							
Organic							

This will give a fair picture of the major waste streams generated in your class. You can also calculate the average waste generated by all the classes in a week.

Waste characterization:
While looking at the total quantity of waste generated in our classes, we also need to understand the **kind of waste** generated in our class. This will help you design the waste minimization plan.

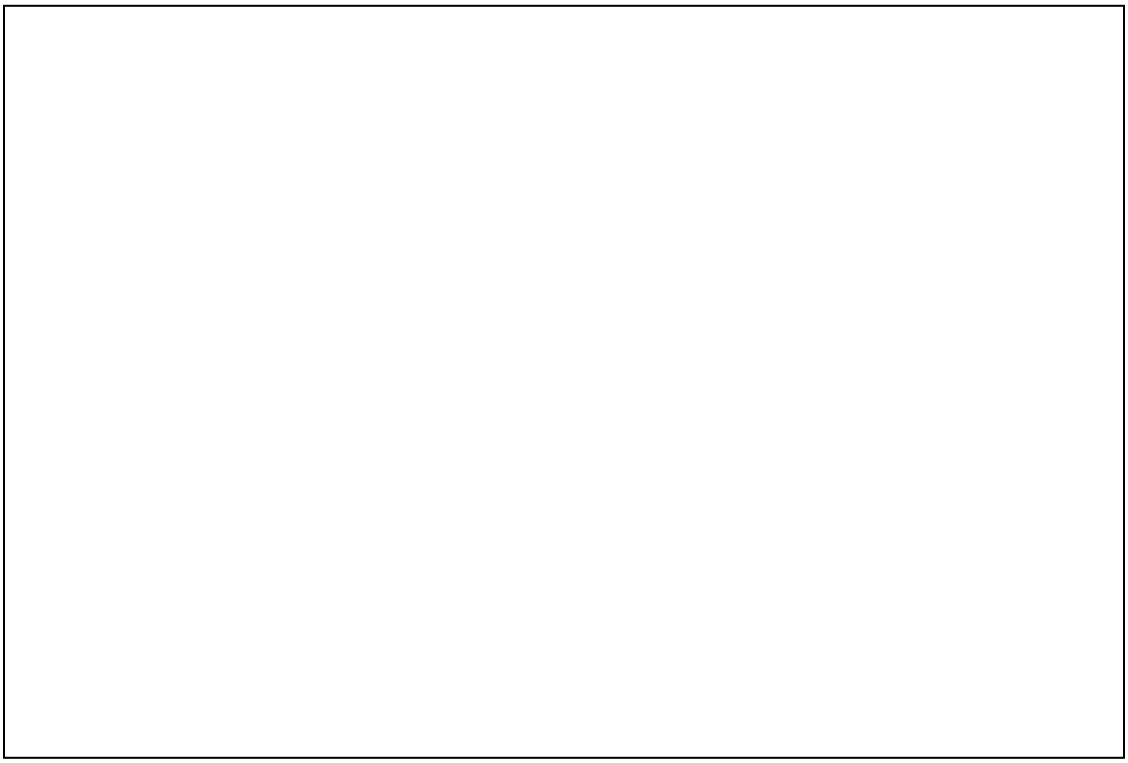
Collect a type of waste generated and look at Recyclable waste generated -

Type of recyclable waste	Amount/Ratio	Where does it go?
Plastic		
Paper		
Aluminium/ Other metals		
Glass		
Metal		

ANALYSIS
Use the table from Worksheet 2 and Worksheet 3 to answer the following questions:

- What is the average waste generated by all the classrooms in the school? You can calculate this by :

  Total waste = Average weight by 1 class X No. of classes. _____
  (*Please remember that this figure is an estimate of the waste generated by the classes. In a school, lot of waste is also generated by school canteen, gardens, staffrooms, laboratories, etc.)*
- Discuss with your science teacher what happens to the waste generated by the school. Where is this waste going? How much waste is recycled or reused? Show this in the form of a flow chart.



ACTION

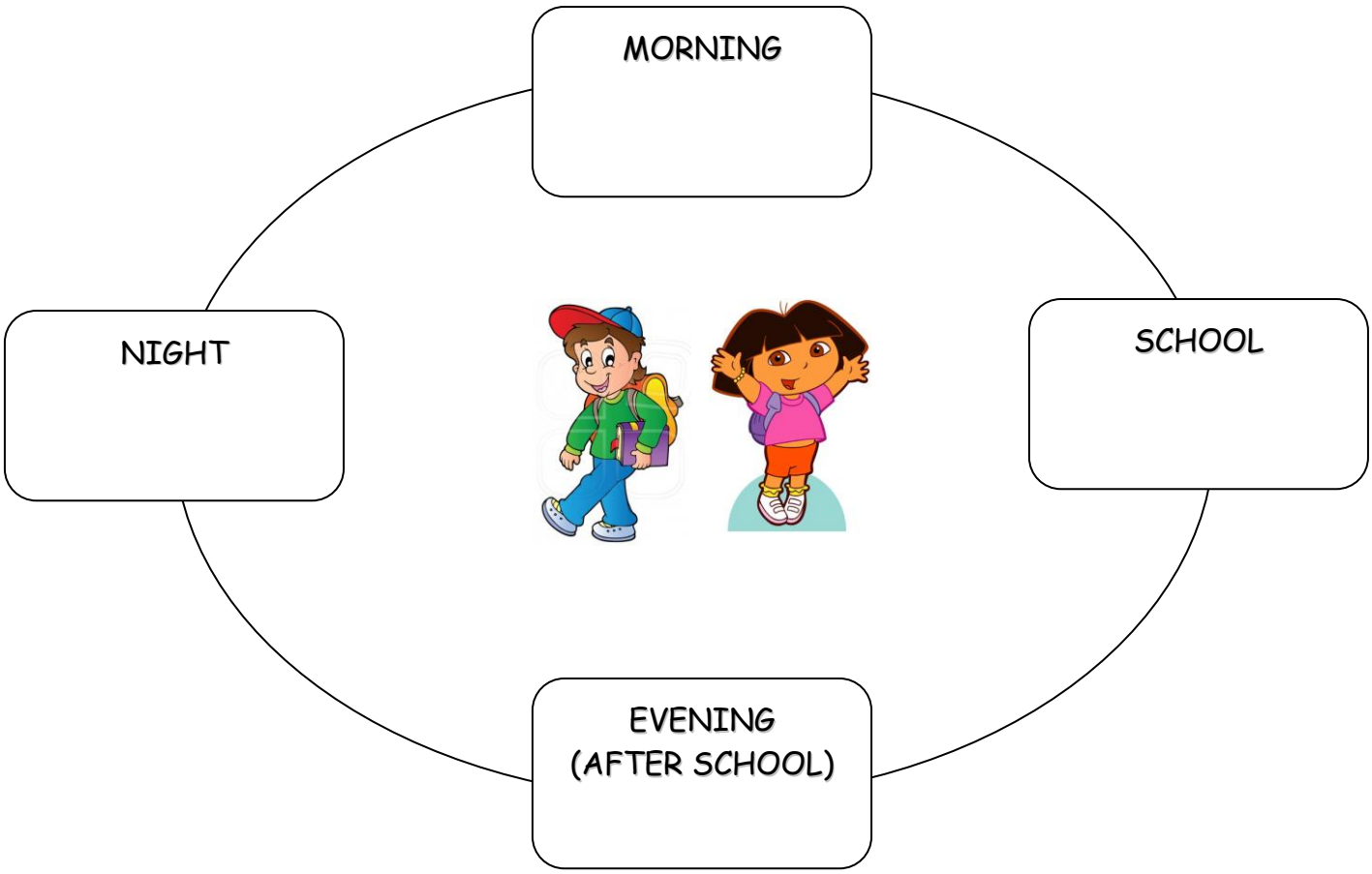
- After categorization of the waste, you will have an idea of the types of waste generated. Look at the type of waste (waste stream) generated the most and why is it generated in such large quantities? How can we reduce it?

- Work out a plan in your school to reduce its generation.

BE A WASTE WARRIOR!

ANNEXURE III

MY WATER CYCLE



MORNING (AT HOME):

- Do I leave the tap open when I am washing my teeth?
- I use bucket for bathing
- I use shower for bathing

SCHOOL:

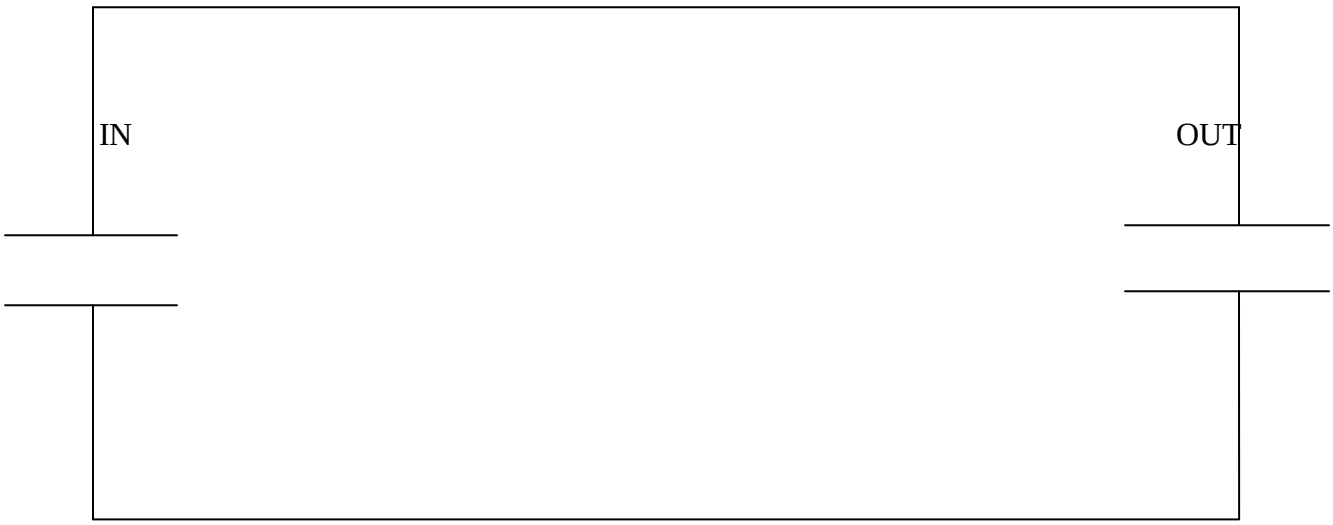
- Do I leave the tap open when I am drinking water or filling up my water bottle?
- Do I keep the tap open when I am washing my hands during lunch time?

AT HOME (AFTER SCHOOL):

- Where does my mother throw away the waste water after washing clothes?
- How often do you wash your bicycle? Do you use waste water for cleaning it or fresh water?
- How often do you water your plants? Do you use waste water for watering plants or fresh water?

Annexure IV
Water Audit Sheet

DOWN THE DRAIN:



Draw a rough map of the water flow into and out of your school, with major stops like overhead tanks, water distribution like drinking water, toilets, etc.

CHECKLIST:

Water Sources

☐ *Ground water*

☐ *Government supply – piped water*

☐ *Rainwater Harvesting*

Try and measure the average consumption of the school through a water meter or check the school water bills.

_____

Water Utilizing Areas

Toilets ☐ Number: ☐

Flush Cisterns ☐

*Calculate average volume of water consumed by this formula: Average volume of each cistern X Number of toilet cisterns.*_____

*Also list number of leaking toilets*_____

Did you know? *Leaking toilets can waste between 4000 and 95,000 litres of water a year and are a common water leak. They can be easily checked by following activities:*

- *Put a few drops of food colouring into the toilet cistern*
- *If colour appears in the toilet bowl before flushing, you have a leak*
- *Flush as soon as test has been completed as food colouring may stain the cistern*

Washbasins ☐ Number: ☐

Cleaning ☐

How often are the toilets cleaned? _____

How much water is consumed_____ (approx number of buckets?)

How often is the school campus & classrooms cleaned? _____

How many times a week are the amenities like corridors cleaned/ hosed out? _____

Drinking water ☐ Number of taps: ☐

Calculate average flow – rate of each tap wit this method. This will help you calculate average consumption of water consumed.

Turn on the tap at full flow for 5 seconds. Collect the water in a measuring cup. Multiply that by 12 for a per minute rate. Use this to estimate how much water flows in the entire day from that tap. Do one tap in each area to get a wider estimate.

Number of leaking taps: _____

Did you know? *A tap dripping at a rate of one drop per second can waste 12,000 litres of water in a year.*

Garden/Potted plants/ Indoor plants Number of taps: ☐

Are the majority of plants native or exotic?

Native ☐ Exotic ☐

How are the gardens watered?
Hose ☐ Sprinkler system ☐

Drip watering system ☐

How often are they watered? _____

What time of the day are they watered? _____

Check out the water used in the garden and for cleaning school compound, etc. Check if it is fresh water or recycled water. If it's not recycled, encourage the school to use waste water from canteen. This can conserve huge amounts of water.

Canteen /Kitchen ☐ Number of taps: ☐
Cooking ☐ _____
Washing ☐ _____
Drinking ☐ _____

Where is the used water from the kitchen disposed? _____

*Is there a mechanism for disposing the waste water safely?*_____

Laboratories ☐ Number: ☐
Number of water sources in laboratories and how are they used? _____

☐ Gym / Playground Number: ☐

Look out for leakages at water sources at all the above locations.

TOTAL WATER CONSUMED:
Calculate the average daily consumption of water in your school by collating the total amount of water consumed in the school. Compare it with the monthly water bill of the school; this will give you an idea of water wastage in your school.

No.	Water consumption activity	Amount of water consumed
A.	Toilets	
B.	Drinking water	
C.	Garden	
D.	Canteen	
E	Laboratories	
F.	Gym/Playground	
Total Water Consumption		
Water supply as per Water Bills		
Estimated difference in supply and consumption		

Water conserving actions at our school

This is to appreciate and capture the positive steps taken by the school towards water conservation. Please enlist the different steps you feel help conserve water in your school.

Areas	Water saving actions
Gardens	
Toilets	
Canteen	
Playground/ Gym	
Drinking water	

Awareness generation initiatives in the school (at present)

_____

_____

Water Wastage

Based on the observations from the water audit conducted by you, capture the problem areas in your school and their possible solutions.

Possible problems	Possible actions

Action Plan for Water Conservation in our school

Chalk out a water conservation plan for your school, in discussion with your teachers and principal, which lists key steps to be taken by the school administration, students and teachers.

Teachers	
Students	
School Administration	

BE A WATER WARRIOR!

AMERICANCENTER

SWECHHA we for change

ANNEXURE V
PHOTOGRAPHS OF THE WORKSHOPS

BANYAN TREE

AKSHAY PRATISHTHAN

AKSHAR

ST. COLUMBA'S

BLOOM PUBLIC SCHOOL

DELHI PUBLIC SCHOOL

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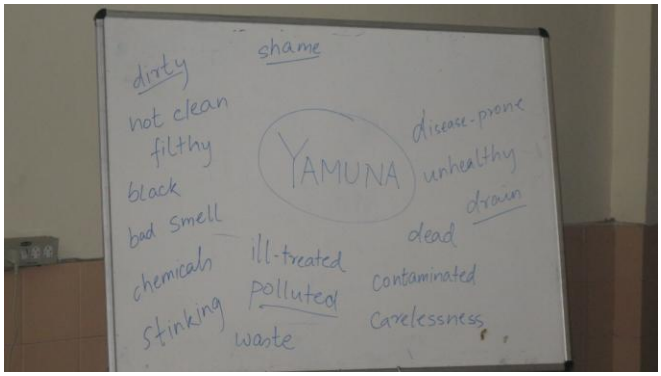
KENDRIYA VIDYALAYA

MODERN SCHOOL



MOTHER'S INTERNATIONAL

SPRINGDALE

ANNEXURE VI
STATEMENT OF EXPENSES
July 2011 – 31st July 2012

Amount Item Description:	Funding Requested from Alumni Affairs (USD)	In-Kind Support / Cost Share (USD)	Amount spend (INR)
Resource Materials: films, worksheets, posters and games	40 X 15 workshops = 600		26,496
Training kit for students - Flyers/handouts, book-marks, recycled paper note-pad	4 X 600 students = 2400		1,05,984
Hiring of Equipment - Projector and sound system	10 X 15 workshops = 150		6,624
Local travel and honorarium to volunteers working on the project	23 X 1 X 15 workshops = 345		15,235
Honorarium to support staff		30 X 2 persons X 15 workshops = 900	
Institutional support - office space, office supplies and other administrative costs		150 X 12months = 1800	
TOTAL	3495.00	2700.00	1, 54, 339