



Environment

Water Community



Education Community



Solution Exchange for the Water Community Solution Exchange the Education Community Consolidated Reply

Query: Developing Learning Material on WaSH for School Children - Experiences; Examples

Compiled by Nitya Jacob, Resource Person and Ramya Gopalan and Sudakshina Malik, Research Associates

Issue Date: 19 June 2008

From Sarita Thakore Centre for Environment Education (CEE), Ahmedabad

Posted 27 May 2008

I work for the Centre for Environment Education. We are implementing 'School- Water, Sanitation, Hygiene' (S-WaSH) in 21 schools of Raipur, Chhattisgarh.

So far, we have completed few demonstration models of sanitation blocks in schools. We have also installed force lift hand pumps to ensure a supply of water and bore hand pumps for drinking water supply. As part of our education and communication activities, we have completed textbook analysis of Standard 1-8 for coverage and gaps in hygiene practices; trained teachers; held stakeholder meetings, studied the Knowledge/Attitude/Practices (KAP) of students in relation to water, sanitation and hygiene; and formed Swachta clubs and trained members and volunteers to help with the day-to-day monitoring and evaluation of hygiene practices.

In addition, as part of project, we are in the process of developing supplementary learning materials for students in Standard 1-8. The details are as follows:

1. Self-learning booklet for Standard 1-3
2. Self-learning booklet for Standard 4-5
3. Activity book for Standard 6-8
4. A puzzle game

We are looking for some insight and guidance developing the material and teaching methodology for these books. Therefore, we would like to request members to share experiences developing a message media material matrix vis-à-vis textbooks/syllabus. We would appreciate age-

appropriate insights for these learning materials, so please suggest which age-group and standards you are sending your suggestions for. For example, for standards 1-3, hygiene information could be more general, while gender inputs could be incorporated into the booklets for standards 4-5 and 6-8. Similarly, environmental hygiene and sanitation could form part of the latter two booklets.

A draft framework for the workbook for Standards 1-5 is available at the following link to give an indication of what we are planning – <http://www.solutionexchange-un.net.in/environment/cr/res27050801.doc> (Size: 42 KB)

We would also request you to share any documentation or modules developed on water, sanitation and/or hygiene for primary school children.

We will use the inputs to design and prepare our materials. Members' contributions will be duly acknowledged. Looking forward to some good responses.

Responses were received, with thanks, from

1. [Meeta Jaruhar](#), School Sanitation Hygiene Education (SSHE), CCDU, PHED, Raipur, Chhattisgarh
2. [Manvita Baradi](#), International City/County Management Association (ICMA), Ahmedabad
3. [Subodh Mishra](#), The Catalyst, New Delhi
4. P. S. Yadav, Haryana Institute of Rural Development & Department of Development and Panchayats, Haryana ([Response 1](#); [Response 2](#))
5. [Naaz Khair](#), Independent Consultant, New Delhi
6. [Ananthakrishnan](#), Indian Institute of Technology (IIT), Bombay
7. [Vijay Ghugey](#), Nisarg Vidnyan Mandal (NiViM), Nagpur
8. [Anil K. Singh](#), New Delhi
9. [Shankar Musafir](#), Centre for Science and Environment (CSE), New Delhi
10. [Arin Basu](#), University of Canterbury, Christchurch, New Zealand
11. [Mini Shrinivasan](#), Independent Consultant, Pune
12. [Ananya Bhattacharya](#), Banglanatak.Com, Kolkata
13. [Ishita Solanki](#), Social Communications and Media Professional, Ahmedabad
14. [Anita Rampal](#), Department of Education and NCERT Textbook Teams at the Primary Stage, New Delhi

Further contributions are welcome!

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Summary of Responses

Complimenting efforts by the Centre for Environment Education (CEE) to create a workbook and activity manual on school sanitation and hygiene, members felt it is a welcome and timely initiative. Responding to CEE's request for suggestions on the contents for the Manual Workbook

for students in Standards 1-5 and Manual Activity Booklet for Students Standard 6-8, as well as teaching methodologies to engage students, they shared insights and guidance based on their experiences in developing learning material for schoolchildren on Water, Sanitation, and Hygiene (WaSH).

Respondents pointed out that although the main focus in school-WaSH (S-WaSH) programmes is on sanitation and hygiene, initial understanding of water is necessary to move forward. The role of schools in hygiene education is still under-utilized, even though several organizations are now working on water, sanitation, health, and hygiene promotion. Students, members explained gather and store information through a process of de-learning and re-learning, and by perceiving the events around them. Teachers and parents play a critical role in shaping a child's thought process, thus enabling them to gain perspectives on health and hygiene.

Examining teaching methodologies, members stressed the need to address the way children learn through measured and regular understanding. The approach also needs to reflect in the lesson plans and mode of delivery in order to transmit functional knowledge that will influence the behaviour of children on a long-term basis.

It cannot be presumed that children will read an entire textbook or learn in a linear fashion, thus discussants suggested the use of games and role play activities to make the teaching process more effective, especially for younger children, and to reinforce the desired behaviour. Another effective tool is simple board games, with colours and stories and at various difficulty levels to attract and encourage children to play. Citing the experience with rural primary school children in Rajasthan and slum children in Kolkata, members noted that song-based animation films and theatre are other important communication tools. Members also suggested engaging in regular role playing, with neighbourhood performances by training teachers to help children develop plays, thereby increase the interaction of teachers with kids and also motivating children to learn and . Finally, they felt the format of the booklets needs to be thin and interesting (i.e. pictures and puzzles) to ensure that the interest of children is captured and sustained.

Discussing the exact content of the booklets, respondents recommended the booklet begin with a simple description of sanitation and its importance. The second chapter could then define health and hygiene, and its relationship to sanitation using pictorial presentations. The third chapter could explain the seven components of sanitation, which are:

- Safe disposal of human excreta
- Proper maintenance and use of drinking water
- Proper management of waste water
- Proper disposal of solid waste
- Food and household hygiene
- Personal hygiene
- Community and environmental sanitation

A separate chapter could then be dedicated to the hazards of open defecation (OD), explaining with pictures the contamination process. The chapter also, members felt could advocate against open defecation, additionally providing information on the location of toilet options.

Another chapter is required on school sanitation, use and maintenance of school toilets, duties of teachers towards sanitation, and how to cook hygienic mid-day meals, discussants advised.

In the manual for students in Standard 6-8, a separate chapter is necessary to provide a brief about menstrual hygiene management and in the book for Standard 6-7 students a chapter on

diseases caused by unsanitary conditions (particularly OD), such as polio is needed. Both booklets can also have a chapter with FAQ's on personal health, hygiene and sanitation.

Members also suggested the booklets include information on setting up of Children Sanitation Vigilance Committees in the villages to underline how children can serve as change agents in the wider community.

Sharing several experiences from across the country, members mentioned how in Chhattisgarh, the [Communication and Capacity Development Unit \(CCDU\)](#) under the Public Health Engineering Department (PHED) is jointly providing school sanitation and hygiene education, with participation from the Departments of Education and Tribal Affairs. In [Jharkhand and Karnataka](#), the [SWASTHH Plus project](#) is working to offer school water and sanitation services to over 5,000 government schools with support from the Central Government. The Centre for Science and Environment also developed a [Green Schools Programme Manual](#), a self-learning assessment module covering a number of important topics, which has been used successfully in schools across India. Members felt this Manual would be a useful to include in any school water and sanitation programme.

Along with specific experiences, discussants mentioned several publications on S-WaSH. [UNICEF](#) has produced a booklet on school sanitation, [WaterAid India](#) developed a song based animation film on hygiene issues and the [Indian Institute of Technology, Bombay](#) developed a self-learning package and film on hygiene aspects targeted specifically at children from nomadic tribes. Additionally, Nisarg Vidnyan Mandal (NIVIM) runs a nature school and the DRCS-ENRE project has created a Creative Lesson Plan series book on water.

Overall, members felt CEE's draft documents provide a good starting point for devising lessons that demonstrate out of the box thinking. While finalising the manual, they underscored the necessity of ensuring it is easy to read and understand, by using simple language, pictures, stories and other interactive tools to engage the interest of children and help them learn about WaSH, and thereby encouraging the adoption of safe sanitary practices.

Comparative Experiences

Jharkhand and Karnataka

Sanitation Infrastructure Combined with Hygiene Agenda (from [Naaz Khair](#), Independent Consultant, New Delhi)

Since 2003, a USAID-UNICEF project has covered 5,000 government schools, and involved State and Central governments, working jointly on the TSC and SSA. Completed in 2007, the project focused on combining sanitation infrastructure development with hygiene, sanitation, and health education in schools for children. Schools then intervened in areas of physical environment, school community linkage and involvement of children through child cabinet. Read [more](#)

Rajasthan and Kolkata

Use of Theatre and Edutainment for Community Education (from [Ananya Bhattacharya](#), Banglanatak.Com, Kolkata)

To educate children on sanitation and hygiene, banglanatak.com effectively used theatre and edutainment to educate rural primary schoolchildren in Rajasthan and slum children in Kolkata. Workshops using theatre activities were also conducted for children to learn about hygiene. The

project also uses community education tools, such as painting posters, writing slogans, staging theatre shows and using talking dolls, to help children learn about hygiene. Read [more](#)

All India

Self-Assessment for Schools and Self-Learning for Children (from [Shankar Musafir](#), Centre for Science and Environment (CSE), New Delhi)

The Green Schools programme is a self-assessment of schools on use of resources with a self learning module wherein students go around schools collecting information about water sourcing, consumption, reuse/recycle, rainwater harvesting and sanitation issues. The students thus make a report card of the school on water management and find out where the school lacks. Through this experiential learning the work then starts on tackling the problems collectively. Read [more](#)

International

From Ramya Gopalan, Research Associate

South Africa

School Sanitation Infrastructure combined with Hygiene Agenda

A pilot involving 70 schools aims to improve school sanitation through focusing on building facilities and maintenance, health and hygiene education. Research commissioned showed deplorable conditions. 35 schools were targeted and construction co-managed with school government bodies (SGBs), funds for materials and labour kept by schools. Project helped show that willingness of school; SGB, learners and teachers were critical to any success. Read [more](#)

Republic of Malawi

Institutionalizing National Standards for Hygiene and Sanitation in Primary Schools, Kasungu and Nkhata Bay Districts

The purpose is to develop and institute national standards for sanitation facilities and hygiene promotion in primary schools which are expected to lay groundwork for extensive application of programmatic approaches. A key partnership was developed with officials and elected assembly members in the districts, forming multi sectoral project management teams. The teams have now taken primary role in advocacy, mobilizing resources and coordinating activities. Read [more](#)

Related Resources

Recommended Documentation

Towards Better Programming - A Manual on School Sanitation and Hygiene (from P.S. Yadav, Haryana Institute of Rural Development and Department of Development and Panchayats, Haryana; [response 1](#))

Manual; Water, Environment and Sanitation Technical Guidelines Series - No. 5; UNICEF in collaboration with IRC International Water and Sanitation Centre; UNICEF/Programme Division; New York; September 1998

Available at http://www.unicef.org/wes/files/Sch_e.pdf (PDF Size: 486 KB)

Deals with both hardware and software aspects needed to bring about changes in hygiene behavior of students and, through these students, in the community at large

Relevance of Water and Sanitation (from [Meeta Jaruhar](#), School Sanitation Hygiene Education (SSHE), CCDU, PHED, Raipur, Chhattisgarh)

Status Report; Ministry of Rural Development; Government of India; New Delhi

Available at

<http://ddws.gov.in/popups/Total%20Sanitation%20Campaign%20Sanitation%20for%20All%20-%202012.pdf> (PDF 341.6 KB)

Report discusses the objectives of the Total Sanitation Campaign to provide sanitation facilities to all rural schools through toilet construction and hygiene education.

Building Awareness on Hygiene Among Children (from [Ananya Bhattacharya](#), Banglanatak.Com, Kolkata)

Article; banglanatak.com

<http://www.solutionexchange-un.net.in/environment/cr/res27050801.pdf> (PDF Size: 140 KB)

Details street theatre based sanitation campaigns undertaken for creating awareness and enabling behaviour change of slum community towards healthy living practices

From Ramya Gopalan, Research Associate

Integrated School Sanitation Programme, Nomfundo Mqadi, South Africa

Paper; 25th WEDC Conference Integrated Development for Water Supply and Sanitation; Addis Ababa, Ethiopia; 1999

Available at

<http://www.schoolsanitation.org/Resources/Readings/South%20Africa%20-%20Case%20study.pdf> (PDF Size: 136 KB)

Details a pilot involving 70 schools to improve sanitation by focusing on building facilities and maintenance issues, and providing health and hygiene education

School Sanitation - Access to Safe and Clean Sanitation Facilities is a Child's Right

Article; IRC International Water and Sanitation Centre; Sanitation Connection

Available at <http://www.sanicon.net/titles/topicintro.php3?topicId=20>

Discusses importance of watsan for schools, noting school sanitation as an investment in the future and the need to address a combination of hard and software issues

School Sanitation and Hygiene Education

Paper; by Marielle Snel; IRC International Water and Sanitation Centre; 2003

Available at <http://www.irc.nl/page/3580>

Provides insights on key elements namely facts, experiences, challenges, implications, lessons learned and issues which stakeholders should take into consideration for SSHE

In-Depth Case Study: School Sanitation and Hygiene Promotion in Malawi

Case Study; Water, Environment and Sanitation; UNICEF

Available at http://www.unicef.org/wes/index_case_study.html

Showcases development and institutionalisation of national standards for sanitation facilities and hygiene promotion in primary schools in Malawi

School Sanitation for the Department of Education, Eastern Cape

Case Study; Series No. 9; Mvula Trust

Available at

<http://www.mvula.co.za/content/download/522/5000/file/School%20Sanitation%20Case%20study%209.pdf> (PDF Size: 107 KB)

Recounts Mvula's experience in integrating school sanitation with user education relating to health and hygiene.

WASH in Schools: Update on Joint Campaign by UNICEF and WSSCC
Article; IRC International Water and Sanitation Centre; 16 August 2004

Available at <http://www.irc.nl/page/10708>

Update on campaign aiming to ensure safe clean water and separate sanitation facilities for boys and girls in primary schools, and empowers them through hygiene education

From Sudakshina Mallick, Research Associate

School Sanitation and Hygiene Education in India

Country Paper; UNICEF; New York; 1998

Available at http://ddws.gov.in/popups/SSHE_in_India_Paper_2004.pdf (PDF Size: 4.75 KB)

Paper discusses the status of school sanitation and hygiene education programme in India and describes the success stories in states such as Rajasthan.

Community Management of School Sanitation Programme-India

Paper; by Abul Kalam, Akhilesh Gautam, Somnath Basu; UNICEF; Nigeria; 2003

Available at wedc.lboro.ac.uk/conferences/pdfs/29/Kalam.pdf (PDF Size: 676 KB)

Discusses the case of UNICEF's school sanitation and hygiene education programme in Orissa which adopted an integrated approach at the community level

Recommended Contacts and Experts

Chetana Kohli, UNICEF or Madhu Ranjan, USAID, New Delhi (from [Naaz Khair](#), Independent Consultant, New Delhi)

ckohli@unicef.org or maranjan@usaid.gov

Recommended to provide the project completion report and a handbook on innovations under the SWASTHH Plus project which began in 2003-04 and was completed in 2007

Recommended Organizations and Programmes

Communication and Capacity Development Unit (CCDU), New Delhi (from [Meeta Jaruhar](#))

Office of Joint Secretary, Department of Drinking Water Supply, (Rajiv Gandhi National Drinking Water Mission), Ministry of Rural development, Government of India, 9th Floor, Paryavarn Bhawan, CGO Complex, Lodhi Road, New Delhi 110003; Tel: +91-11-24361043; Fax: +91-11-24364113; jstm@water.nic.in; <http://ddws.nic.in/CCDU.htm>

The Jharkhand Unit under the Total Sanitation Campaign is working on school sanitation and hygiene education with participation from Education, Tribal and line departments

WaterAid India, New Delhi (from [Subodh Mishra](#), The Catalyst, New Delhi)

First Floor, Nursery School Building, C-3, Nelson Mandela Marg, Vasant Kunj, New Delhi 110070;

Tel: +91-11-46084400; wateraid@wateraid.org;

http://www.wateraid.org/international/what_we_do/where_we_work/india/6457.asp

Conducts the Little Doctor programme with rural students to promote good hygiene both in schools and community, also produced a song based animation film on hygiene issues

School Water and Sanitation Towards Hygiene and Health SWASTHH Plus Project, Multiple States (from [Naaz Khair](#), Independent Consultant, New Delhi)

American Embassy, Chanakyapuri, New Delhi 110021; Tel: +91-11-2419-8000; Fax: +91-11-

2419-8454; http://www.usaid.gov/in/our_work/activities/OSD/edu_swasthh.htm

A joint USAID/UNICEF which by improving school watsan infrastructure, conducts health and hygiene education for children, building life skills for behavioural change

Indian Institute of Technology, Mumbai (from [Ananthakrishnan](#))
Powai, Mumbai 400076; Tel: +91-22-25722545; Fax: +91-22-25723480; <http://www.iitb.ac.in/>
Developed a self-learning package and film on hygiene aspects targeting children of nomadic tribes, to be awarded the UNESCO Prize for use of ICT in Non-formal education

From [Anil K Singh](#), New Delhi

Water and Sanitation Management Organization, Gujarat
3rd Floor, Jalsewa Bhavan, Sector 10-A, Gandhinagar 382010; Tel: +91-79-23247170; Fax: +91-79-23247485; wasmow@wasmow.org; <http://www.wasmow.org>
Established to achieve drinking water security, habitat improvement and environmental sanitation, also developed and used WaSH materials for school children.

Pravah, New Delhi
C-24 B, Second Floor, Kalkaji, New Delhi - 110019; Tel: +91-11-26440619; mail@pravah.org;
<http://www.pravah.org/page02.htm#programe>
Encourages youth to undertake effective leadership and build good citizenship through educational programmes, also developed and used WaSH material for school children.

From [Shankar Musafir](#), Centre for Science and Environment (CSE), New Delhi

Green Schools Programme, New Delhi
41, Tughlakabad Institutional Area, New Delhi - 110062; Tel: +91-11-29955124; Fax: +91-11-29955879; cse@cseindia.org; <http://www.cseindia.org/programme/eeu/html/index.asp>; Contact Shankar Musafir; Assistant Coordinator; shankar@cseindia.org
An environmental audit on water, energy, land, air and waste in the schools done by students using a manual and thus prepare report cards of the school's use of resources

Environment Education Unit, Centre for Science and Environment (CSE), New Delhi
41, Tughlakabad Institutional Area, New Delhi 110062; Tel: +91-11-29955124; Fax: +91-11-29955879; cse@cseindia.org; <http://www.cseindia.org/programme/eeu/eeu-index.htm>
Aims to provide quality resource material/programmes for school, college students and environment educators to create awareness about environmental issues such as water

Development Research Communication & Services Centre, Kolkata
58A, Dharmotola Road, Bosepukur, Kasba, Kolkata - 700042; Tel: +91-33-24427311; Fax: +91-033-24427563; drcsc@alliancekolkata.com; <http://www.drcsc.org/>.
Recommended for its Creative Lesson Plan series book on Water which contains projects executed by children on water issues including hygiene

National Council for Educational Research and Training (NCERT), New Delhi (from [Anita Rampal](#), Department of Education and NCERT Textbook Teams at the Primary Stage, New Delhi)
Sri Aurobindo Marg, New Delhi 110016; Tel.: +91-11-26560620/26864811; Fax: +91-11-26864811; <http://www.ncert.nic.in/index.htm>.
Recommended for the new NCERT EVS textbooks for classes III-V which deal with themes such as water, sanitation, scavengers, consciously and differently

School Sanitation & Hygiene Education, New Delhi (from Ramya Gopalan, Research Associate)
Office of Joint Secretary, Department of Drinking Water Supply, (Rajiv Gandhi National Drinking Water Mission), Ministry of Rural development, Govt. of India, 9th Floor, Paryavarn Bhawan, CGO

Complex, Lodhi Road, New Delhi - 110003; Tel: +91-11-24361043; Fax: +91-11-24364113
jstm@water.nic.in; <http://ddws.nic.in/ssheindex.htm>

Ensures child friendly water supply, toilet and hand washing facilities in the schools and promote behavioural change by hygiene education, also encouraging enrolment of girls

Recommended Portals and Information Bases

From Ramya Gopalan, Research Associate

Toolkit on Hygiene, Sanitation and Water in Schools

<http://www.schoolsanitation.org/>

Makes available information, resources, and tools that provide support to the preparation and implementation of Hygiene, Sanitation, and Water in Schools policies and projects

School Sanitation, IRC International Water and Sanitation Centre, Netherlands

<http://www.irc.nl/page/5985>

Lists key articles describing many of the elements needed for scaling up programmes for water, sanitation and hygiene in schools while ensuring quality and sustainability

WASH in Schools, IRC International Water and Sanitation Centre, Netherlands

<http://www.irc.nl/sshe>

Thematic pages dealing with Water, Sanitation and Hygiene (WASH) in schools, captures news and notes, publications, projects, case studies, framework and key components

Water, Sanitation and Hygiene in Schools, UNICEF, New York

http://www.unicef.org/wes/index_schools.html

Provides resources on improving health of school-aged children, highlights need for hygiene promotion, life skills development, watsan and hand-washing facilities in schools

Recommended Tools and Technologies

Activity Sheet on Environment Education (from [Shankar Musafir](#), Centre for Science and Environment (CSE), New Delhi)

Monthly Activity Sheet; Owned by Centre for Science and Environment (CSE), New Delhi.

Available at http://www.cseindia.org/programme/eeu/html/activ_archive.asp

Deals with experiential learning on environmental issues such as water to encourage young students to explore their physical environment as a 'do and learn' process

Related Consolidated Replies

Role of Children in Spreading Water and Sanitation Awareness, from Gyanendra Mishra, UDAAN, Aligarh (Experiences). Water Community and Education Community. Issued 14 May 2007

Available at <http://www.solutionexchange-un.net.in/environment/cr/cr-se-wes-ed-19040701.htm>

Provides experiences from across the country as well as tools and techniques in involving children in spreading water and sanitation (watsan) awareness

Status of Environment Education in the School Curriculum, from Livleen Kahlon, TERI, New Delhi (Experiences). Education Community and Water Community. Issued 28 February 2007

Available at <http://www.solutionexchange-un.net.in/education/cr/cr-se-ed-wes-01020701.htm>

Provides experiences, difficulties encountered when integrating EE, and offers suggestions for EE to be more joyful, inclusive and meaningful experience for children

Responses in Full

Meeta Jaruhar, School Sanitation Hygiene Education (SSHE), CCDU, PHED, Raipur, Chhattisgarh

It's great to know that your organisation is working a model for school sanitation and hygiene components. It would be nice if you let us know the details of the chosen area. Indeed such pilot provides enriching insights for State to formulate strategies. However, I would like to inform you that Communication and Capacity Development Unit (CCDU), PHED, Chattisgarh under Total Sanitation Campaign is working on school sanitation and hygiene education with the participation of Education, Tribal and line departments. It would be great have a consultative meeting to discuss on the worked out interventions.

Manvita Baradi, International City/County Management Association (ICMA), Ahmedabad

Theatre is a wonderful communication tool which u can use. These concepts are best learnt while role playing, and works best with kids. Why perform plays only as balmela? This should be a regular activity- twice, thrice in a week that kids could perform in neighbourhoods. We have done in the past, and believe me - it works wonders. Of course you will require training in getting kids motivated. We can help to train teachers into process of play making and working with kids.

Subodh Mishra, The Catalyst, New Delhi

I have produced a song based animation film on hygiene issues for WaterAid India. Audio and video CDs are available with them. You can incorporate the song and film in your campaign.

P.S. Yadav, Haryana Institute of Rural Development & Department of Development and Panchayats (response 1)

I personally feel that the efforts being made by Centre for Environment Education for preparing i) Manual Workbook for students Std.1 to V and ii) Manual Activity Booklet for Students standard VI to VIII are praiseworthy. The issue of sanitation has always taken aback seat in the past. But it appears that now the situation is turning for the better.

First of all I would like to inform that UNICEF has published a booklet on school sanitation which contains about 35 pages including annexure. Whether the booklet has reached the users / learners? How far this booklet has proved useful or still lying in the libraries of the Institutions? I have seen in large numbers in one of the institutional library.

Secondly, while finalizing the Manual, it should be kept in mind that the booklet is not very heavy and full of big- big jargon. It should be in simple language understandable by the small children, who are already overburdened with heavy syllabus. It should run like a fairy tale so that the children of this age read it with interest and learn about Health, Hygiene and Sanitation and adopt the good sanitary practices in life.

Regarding the Contents, I would like to suggest that:

- i. The booklet should start with the simple description of Sanitation and its importance.
- ii. The second Chapter should define health and hygiene and relate the both with Sanitation. As far as possible there should be pictorial presentation of the all interviewed in a circle.
- iii. Sanitation and its seven components should be explained in the next chapter. The Seven Components of sanitation are:
 - a. Safe disposal of Human Excreta,
 - b. Proper maintenance and use of drinking water,
 - c. Proper management of waste water,
 - d. Proper disposal of solid waste,
 - e. Food and household hygiene,
 - f. Personal hygiene, and
 - g. Community and environmental Sanitation.
- iv. Open defecation and hazards should be mentioned in a separate Chapter. It should be explained that a fly sitting on the faecal matter (human excreta is more dangerous than the lion.). The contamination process should be explained in a round circle. How open defecation contaminates our water and food sources should explain. Instead of telling them choice of place of defecation, we should tell them the options to avoid OD.
- v. School Sanitation, duties of a teacher towards sanitation, how to cook hygienic MDM should also be given in a separate chapter. How to use and maintain school toilets
- vi. A brief about Menstrual Hygiene Management should be explained in one chapter for Manual for Standard VI-VIII.
- vii. We can give an interesting presentation on formation of Children Sanitation Vigilance Committees in the villages as to how Children can be instrumental in controlling the practice of open defecation.
- viii. A simple quiz like how many legs a fly have? How much excreta it carries with one leg? Etc. can also be introduced?
- ix. In VI-VII Standard book, we should explain about the deadly diseases spreading due to unsanitary conditions particularly with OD. We can relate Polio with the Practice of OD.

Efforts should be made that the Booklet is thin and interesting, palatable to School Children.

Naaz Khair, Independent Consultant, New Delhi

Let me tell you about SWASTHH Plus Project. SWASTHH Plus stands for school water and sanitation towards health and hygiene. The project was implemented in two States, Jharkhand and Karnataka. It covered over 5000 government schools. The project was a USAID-UNICEF initiative and involved the governments of Jharkhand, Karnataka and Government of India. The TSC (Total Sanitation Campaign) and SSA worked together in the respective States to implement the project. The project began in 2003-04 and was completed in 2007. A project completion report and a handbook on innovations under SWASTHH Plus are available. You may contact UNICEF (Chetana Kohli- ckohli@unicef.org) or USAID (Madhu Ranjan- maranjan@usaid.gov) for the documents. There's a lot of information available in these documents that answer the specific queries raised by you. Information on NGO partners, resource agencies, material developed etc. are all available in these documents.

All the best.

Ananthkrishnan, Indian Institute of Technology (IIT), Bombay

We at IIT Bombay have developed a self-learning package as well as a film on hygiene aspects targeted specifically to children of nomadic tribes. This work has been recently awarded the

UNESCO Prize for use of ICT in the Non-formal education category (Award ceremony scheduled for end-June 2008).

Vijay Ghugey, Nisarg Vidnyan Mandal (NiViM), Nagpur

It is a very pleasant fact for today's Environmental Education (EE). Basic need of EE starts from these groups. We are also working with students for the same theme under the banner Nature School. It is an activity of Nisarg Vidnyan Mandal (NiViM) through people's participation. Please send sample copies of material prepared by you for interaction and exchange of solution.

P.S. Yadav, Haryana Institute of Rural Development & Department of Development and Panchayats (response 2)

In addition to my earlier suggestions regarding the manual I would like to further add that 1 chapter on FAQ's on personal health, hygiene and sanitation may also be added to both the booklets

Anil K. Singh, New Delhi

Water, sanitation, health and hygiene promotion have gathered attention of the stakeholders and in this sector Govt and Non-Govt agencies are involved in many ways to get outputs. On water and sanitation we have sufficient experience and it has been shared at many platforms. Now the most challenging tasks are water quality and its surveillance, sustainability of water source, availability of quality sanitary materials for construction of toilets and promotion of available sanitation technology and Safe disposal and recycling of waste and Good habitat and environment.

There are sufficient numbers of Institutions, agencies and organisations having useful data on health and hygiene. In schools where students with juvenile mind perceive the events happening around, information gets stored in a memory through de-learning and re-learning processes. At this stage the role of the teachers and the parents are highly essential. We have to address two situations namely the home and school simultaneously so that the child can get continuous influence to orient his thought process to make a nice perception in his mind about good health and hygiene.

There are more social and economic issues if addressed properly lot of the problems encountered in promotion of this sector gets covered automatically. The generalised nature of recommendation for the specific issues in a particular region of the country can not be prescribed. We have very good experience from the pilot projects and also have information on the ground realities in implementation of TSC. We have finished recently case studies on hygiene carried out in Hajipur District of Bihar. The data analysis and the output aimed through it have been shared with officials and other stakeholders and this data is not owned by anybody owns it. It is a document only. The question that arises is

1. How the data collected through mid term analysis, evaluation studies and case studies can influence the Govt agencies to work with it and experiment with new ideas?
 - The guidelines are made and remade with focus on financial perspectives and less on social and technological implications. Though we said it is community led and people oriented but still far away.
 - The guidelines and the procedures adopted by the implementers are rigid and does not permit the entry of innovations. Local solutions and peoples needs are considered in a generalised manner.

- The people and children want right and less information so that they can understand slowly but regularly. In some tribes of the North east as a tradition they maintain homestead and do cleanliness as a traditional practice.
- Traditional practices amongst caste and community are different even though they belong to the same Panchayat. The role of community leaders have been recognised and well documented which reveals how the community is organised for a particular cause.
- The project learning and the project professional's experience have been working in a boundary line and people's suffering starts after its completion and withdrawal.
- People and institutions must be integrated in various ways and the same have been shown in the country by many agencies and organisations and results are known.

Let us use the existing knowledge and share it so as to find the solution. For the sake of new work we should avoid duplicity and voluminous learning materials. UNICEF produced lot of such materials with the help of communication experts and adjusted it with local requirements. The State Government modified some primary school curriculum also providing sufficient inputs on hygiene but gender issues are not yet properly covered. They should inform us of what are the important points to address in a period with a community with regard to WASH. Specific and focussed approach should be helpful in getting the inputs of sector professionals. WASMO under the Government of Gujarat, Pravah and others have also developed materials on such subjects and used it in the projects.

I hope we can invite more professionals to participate in this manner.

Shankar Musafir, Centre for Science and Environment (CSE), New Delhi
 Centre for Science and Environment's (CSE) Green Schools Programme Manual has some ideas worth replicating in any programme related to Water and Sanitation in Schools.

Although essentially aimed at Students from Standard 5 and above, some of the activities may be relevant for junior classes.

As I understand the main focus in the S-WASH programme may be on 'S' and 'H' - however an understanding of 'W' also helps before we move on to 'S' and 'H'.

The Green Schools Programme Manual is basically a self-assessment of the school on use of resources like Water, Air, and Energy etc. It's a self learning module wherein the students of a school go around the school to collect information about water sourcing, consumption, reuse/recycle, rainwater harvesting and sanitation issues (that's what happens in the water section)

With regard to sanitation the students count the load per unit on ablution taps, water closets, urinals etc and find out how much more is required to meet the ISI standards.

The students thus make a report card of the school on water management and find out where the school lacks. The work then starts on tackling the problems. The learning is experiential as the students collect the data and is contextual as it happens in the context of the school and answers the question 'Where does my school stand?'- which would further lead to the question 'where does my household stand in terms of water management'

The sections on assessing the water consumption of the school and rainwater harvesting can be easily customised for any region in the world. As this is a self assessment, it would really gel with the self-learning modules, which CEE intends to create.

It is also a creative model of how young people can be involved in collectively assessing and consequently tackling problems at an institutional level.

You can find more information on the same at CSE's Environment Education Unit at <http://www.cseindia.org/programme/eeu/html/index.asp>

CSE has also developed some activities with regard to water, this activity sheet may be accessed at http://www.cseindia.org/programme/eeu/html/activ_archive.asp

The DRCSC-ENRE project's Creative Lesson Plan series book on Water will surely be of lot of help as are the other books in the series on Vegetables, Trees, and Insects. The booklet contains projects executed by children on water issues including hygiene. The projects are really worth emulating in any part of the world. There are also interesting sections on water reuse etc. For more information: E-mail: enre_sc@vsnl.net; Website: Development Research Communication & Services Centre (DRCSC) - <http://www.drcsc.org/>

Arin Basu, University of Canterbury, Christchurch, New Zealand

I had taken a brief look at the word document outlining the lesson plans and the contents. It's a nicely thought out plan and even if there may be other documents already present (by UNICEF), the current document can be a good starting point to devise lessons that shows thinking beyond the box.

Looking at the lesson plans, and the mode of delivery, it seemed to me that this is more about transmitting what is known as "functional knowledge", in other words, at the end of the education, you expect that the recipients (in this case, children of various age groups) would demonstrate an intended behaviour that will be their part of life. Textbook formats are fine, but you expect that a student would actually read the textbook from either one end to other, and play the games in a linear manner and somewhere in that game playing the information will get transmitted. That's probably a valid assumption, except that whether these concepts can be ingrained by a linear game playing, or what if the game playing becomes so "boring" that the child abandons and then skips the text book altogether?

If I were to design an educational curriculum based on the contents presented in the word document (and the contents seemed very appropriate to me), I'd probably devise a simple board game (one game, or a series of staged board games of differing challenges, but built around the same concepts to reinforce knowledge). The board game could be like a graphic novel, and yet distinct from a text book, so that the child would not necessarily be put off, yet can be quite inexpensive to produce. With colours and stories, it could also be made quite attractive and there might be a series of board games of different difficulty levels that the child would be encouraged to negotiate (with some clever social marketing).

So, the games would incorporate each of these educational elements discussed in the draft document, incorporate each of the games, but might also incorporate some type of role play and get everything incorporated in a seamless manner to encourage students and young children to use and actually play the game. The game playing can reinforce some behaviour that the child would have learned at various stages of the game.

I am sure there are experts in these areas, but at any point, if needed, I'd be happy to positively contribute to the project.

Mini Shrinivasan, Independent Consultant, Pune

One thing that strikes one when discussing water and sanitation issues with teachers and principals in Municipal schools is their attitude. All of them come from a higher socio-economic group than the children in their schools, as it is a sad fact that at present only the poorest of the poor send their children to government schools in the urban areas.

The attitude of most teachers was found to be, "They (the children) do not have these facilities at home, so they do not expect them in school, and they don't know how to use them if they are provided." This is usually said with the unsaid corollary - "therefore, don't provide them at all."

If we can get this attitude to change to one that says, "They do not have these facilities at home, so let us provide them in school, so they will learn how to use them, as they have a right to." It's a small matter, but where teachers have thought like this, there has been a huge difference in the general cleanliness level in the school, including toilets - only a very few examples exist in Pune Municipal schools. So training for water and sanitation issues should have a component of giving teachers this rights perspective.

Ananya Bhattacharya, Banglanatak.Com, Kolkata

Our organisation banglanatak dot com uses theatre and edutainment (education through entertainment) as tools for community education. We used the same approach to teach children about hygiene and sanitation. We found that our approach really worked. We found workshops on hygiene and sanitation using theatre based activities very effective with children in rural primary schools in Rajasthan and slum children in Kolkata. As the children took part in different activities, they learned about hygiene. In Kolkata slums, the children actually took up the issue of making their slum clean. They painted posters, wrote slogans and staged theatre shows. We have also used ventriloquism shows very effectively. Here a talking doll asks the children questions and 'teach' them about hygiene. We used popular comic and cartoon characters in our posters and the children loved them. The link below contains a brief note with I am attaching a brief note with pictures: <http://www.solutionexchange-un.net.in/environment/cr/res27050801.pdf> (Size: 137 KB)

Ishita Solanki, Social Communications and Media Professional, Ahmedabad

Developing any material for school children involves a very different type of capacity building effort which is why we are talking.

The material should be able to touch upon prevalent practices at school /home to make children aware (i am not using the word sensitise just to ensure that we need to keep the material simple and

do-able) make children think as you have a dialogue with them about what they do, or more imp. how they behave when it comes to water, sanitation or hygiene.

I would like to share my experience with celebrating events in Schools.

The event celebrated was world water day, and while the occasion was clubbed with a drawing / painting exhibition on the subject, for fun and activity. It was initiated with dialogues of the

ways in which school children can use/empty the left over water in their water bottles -could be in a flower-pot or a plant in their own school or home. This is just one example to make children conscious about what they do with their left over water. Simple , do-able material for WASH.

Many such simple, unnoticed practices among school children come out from children themselves.

This is a very effective way of getting "Messages" for the Learning Material on WASH, to bring about behaviour change in school children.

I hope you find this helpful.

Anita Rampal, Department of Education and NCERT Textbook Teams at the Primary Stage, New Delhi

I must confess that the approach outlined in the workbooks you mention is very problematic because it is didactic and gives 'messages' about hygiene and sanitation - quite contrary to an approach (outlined by the NCF 2005) where children are allowed to construct knowledge themselves, while they critically think and question about many of these issues which are not related only to 'information' but more importantly to social realities.

The new NCERT EVS textbooks for classes III-V deal with many of these themes in a consciously different manner - and you must surely have seen those because one of our team members was from CEE. The books are on the site www.ncert.nic.in and I invite others too to look at the chapters, esp those from Class V on water, malaria, 'whose work is this?' (about scavengers and those who clean our homes and schools) etc. It has indeed been a very challenging task to go against the grain of the traditional approaches towards hygiene and sanitation in school, which often reflect middle class and caste-based preoccupations with cleanliness and filth.

Many thanks to all who contributed to this query!

If you have further information to share on this topic, please send it to Solution Exchange for the Water Community in India at se-wes@solutionexchange-un.net.in and/or Solution Exchange for the Education Community in India at se-ed@solutionexchange-un.net.in with the subject heading "Re: [se-watr][se-ed] Query: Developing Learning Material on WaSH for School Children – Experiences; Examples. Additional Reply."

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