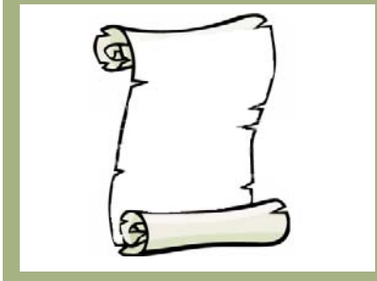
Green Schools Network

ACTIVITY SHEET

August 2009

Why talk about paper?



A single sheet of paper may look insignificant, but the cumulated use of thousands of such sheets each day can have a huge impact on the environment.

Paper contains many harmful chemicals. When it is thrown away, these chemicals enter our food pyramid. It also takes a considerable amount of energy to produce. It is a proven fact that reducing paper use helps alleviate climate change. Cutting down forests affects the soil, water and local ecosystem and directly affects the earth's climate, since trees are the largest 'CO_2 sinks' that absorb carbon dioxide.

Name.....

School Name .....

Class..... **Date** .....

Gobar Gyan

There is a lot of talk about reusing and recycling paper, but what we don't realize is that REDUCING our consumption of paper is the best way to save of. Even with the presence of efficient recycling programs, huge amount of paper still land up in landfills. Remember, it is not only the manufacturing of fresh paper that results in the depletion of forest cover. Each round of recycling renders leads to a loss of fibers which translates to loss of more trees. And, once paper has been used, disposing it also becomes huge waste problem and adds to the growing waste pile.

Activity: 1

Is your school 'Paper Efficient'?

Switching to recycled paper is definitely the way to go. As per experts, 40 cases of recycled copy paper can save more than **7** trees, **2,100** gallons of water, **1,230** kilowatt-hours of electricity and **18** pounds of air pollution.

You too, can calculate this impact for your school.

- Ask your school administration how much paper is purchased for daily consumption
- Calculate its weight in pounds or tonnes.
- Go to the Environmental Defense Fund's online **Paper Calculator** at ***http://www.edf.org/papercalculator/*** (compare individual papers, compare paper groups).
- Enter the weight and type of paper you use and you can determine the amount of wood, energy, water, solid waste and greenhouse gas emissions you will prevent by switching to recycled.

Hi! I am Pandit Gobar Ganesh. You will find me in Gobar Times—-a magazine that tells you how your everyday life is linked to the world around you. Hooked, huh? If you want to know more about me and GobarTimes visit us at:

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What does your school's paper efficiency tell you about your school's paper use?

_____

Can it be improved? _____

Improving Paper Efficiency means accomplishing the ***same task***, with ***less mass of paper*** used.

Activity 2:

Improve your school's paper efficiency:

How do you start this process? **Conduct your own mini-audit!**

- A survey of the paper use patterns in your school is important to get an idea of the current consumption pattern and the mindsets of the students, staff and teachers vis-a-vis. This is the first step towards initiating improvement in your school's paper use efficiency. Interview at least four people about their paper usage: these should include:
  - one teacher
  - one staff member from the administration office
  - one junior student
  - one senior student

- Your questions may vary from the ones listed below, but we have provided basic guidelines you could choose to follow. Don't hesitate to personalise or come up with your own unique questions!

  Approximately, how much paper do you consume in a day? _____

  Out of this, how much is
  - Fresh Paper? _____
  - Recycled Paper? _____
  - Reused Paper? _____

- On a scale of 1 to 5, assign a number to each of the following activities based on how much paper you use while doing it (5 meaning 'I use the most paper for this activity' and 1 meaning 'I use the least amount of paper for this activity')
  - Printing 1 2 3 4 5
  - Photocopying 1 2 3 4 5
  - Writing (work related) 1 2 3 4 5
  - Writing (personal) 1 2 3 4 5
  - Miscellaneous uses: 1 2 3 4 5

    (wrapping, envelopes etc.)

  After using the paper, how do you dispose of it?
  - I recycle all the paper I use ☐
  - I recycle half and throw away the other half ☐
  - I try to maximize reusing the paper before disposing it ☐
  - I simply throw it away after using it once ☐

Do the answers of your four candidates match or are they different? _____

Who has the best 'paper-practice'? _____

Why? _____

_____

Activity 3:

RECYCLE YOUR OWN PAPER: Begin with separating paper into three groups: white office paper, newspaper, and mixed-color paper. Be sure to remove wrappers, plastic stickers, rubber bands- or anything that is not paper.

1. Tear It Up: Take your paper and tear it into small pieces. One-inch squares is good, but remember- the smaller the pieces, the better.

2. Blending: Add your paper pieces to the blender until it is about half full of torn paper. Fill the blender about ¾ full with warm water. Run the blender for about 45 seconds. Run it until the pulp looks smooth and well blended.

3. Make Your Mould: Your homemade mould will be made from the window screen and old picture frame. To do this, stretch the window screen over the picture frame and staple or tack it down securely. The screen should be as tight as possible.

4. Mix It Up: Fill your plastic tub with water until it is about half full. Add 3 blender loads of pulp and stir it into the water.

5. Submerge Your Mould: Dip your mould into the pulp and then level it out while it is submerged. Ensure that the pulp on top of the screen looks even to get an even textured paper. Slowly lift the mold out of the water.

6. Squeeze Extra Water Out: Hold the mould with one hand and cover the wet pulp completely with a felt. Flip the felt, pulp and mould over so that the felt is on bottom and the mould is on top. Use a sponge to press out as much water from the pulp as possible.

7. Flat Pulp: Hold the felt flat and slowly lift the edge of the mould. The wet sheet of paper should stay on the felt.

8. Repeat: Repeat the steps above until your pulp runs out. Stack the fabric squares on a cookie sheet. Press out any remaining water using another cookie sheet.

9. Finish Up: After you press the excess water out, separate the sheets of paper carefully. Lay each piece (still stuck to the felt) on sheets of newspaper. Wait for them to dry and peel off the felt.

Congratulations! You've recycled your very first batch of paper! Not too difficult, right?

Trees are not the only things we lose while making paper. Producing paper has impacts on land-use and forests as well. A variety of harmful emissions are generated from paper processing-pulping and bleaching, making it a 'Carbon Intensive' activity. In fact, the Paper Industry is the third largest source of Carbon (that contributes to global warming) in the world!

On a slightly larger scale, recycling one tonn of paper saves 7,000 gallons of water, 380 gallons of oil and enough electricity to power an average house for six months.

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