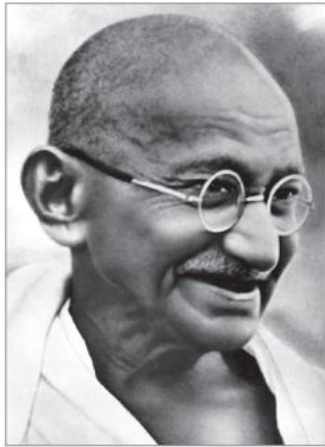




For creating **SMART, SWACHH and SUSTAINABLE** living

Swachh Bharat Swachh Vidyalaya

A National Mission



“Sanitation is more
important than
independence.”

– Mahatma Gandhi Ji

*He made cleanliness and sanitation
an integral part of the Gandhian
way of living. His mission was total
sanitation for all.*



Achieving health and educational outcomes through a combination of clean school, clean hands and a nutritious mid day meal

We can make a difference at schools through Peepal's biodigesters.

Swachh Bharat: Swachh Vidyalaya is the national campaign driving 'Clean India: Clean Schools'. A key feature of the campaign is to ensure that every school in India has a set of functioning and well maintained water, sanitation and hygiene facilities.

As per guidelines on Food Safety and Hygiene for school level kitchens under mid day meal scheme (F.No.14-2/2013-EE.5(MDM-1-2), issued by HRD, Mid Day Meal division, Govt of India: effective implementation of drainage and waste disposal is important.

Peepal's biodigesters are useful for SCIENTIFICALLY disposing left over food waste in schools, mainly from mid day meal scheme. The biogas generated can be utilized in cooking for the same. The organic fertilizer can be used for school garden and plants.

Apart from managing food waste the Peepal's waste management programs also help the students of schools across the India to learn something new on solid waste management, renewable energy and organic fertilizer other than what they have learnt from their textbooks. The solid waste management through biogas plants would also give insights to children on keeping their premises clean and also how to save environment.

OBJECTIVES:

- Analyze the importance of energy and how they use energy in their lives.
- Describe the difference between renewable and non-renewable sources of energy.
- Experiment with creating and capturing biogas.
- Understanding energy crisis - need for renewable energy.
- Waste management - need for scientific way of disposing organic waste through biodigester.
- Anaerobic digestion - science behind it.
- Organic fertilizer - what is organic fertilizer.

PROCEDURE:

I) Discuss energy. Ask students, "How do you use energy? What types of energy can you identify?" When you move, you are using energy. When you talk or think, you are using energy. When you drive, use a light or watch TV, you are using energy. Ask the students to name five activities they do each day that use energy. Next, inquire if they can think of anything they do that does not use energy. (No – everything you do requires energy!)

Ask the students, "Where does energy come from?" Listen to their responses. Summarize their statements. Guide students to the conclusion that all energy starts with the sun.

Explain the concept of renewable vs non-renewable energy.

Renewable Energy – Comes from sources that do not run out or that can be replenished within a short period of time. Sources of renewable energy include: Wind, Water, Sun, biomass (energy obtained from

plants, animals or their products such as wood, corn, grasses or manure), Geothermal (heat from deep within the earth).

Non-Renewable Energy – Comes from sources that cannot be replenished within a short period of time. Sources of non-renewable energy include: oil, coal, natural gas or nuclear energy.

II) What is biogas? What is biogas plant?

Biogas is a form of energy that comes from living things. Biogas is generally made from animal manure and organic waste.

A biogas plant supplies energy and fertilizer. It improves hygiene and protects the environment. A biogas plant lightens the burden on the State budget and improves working conditions for the housewife. A biogas plant is a modern energy source. A biogas plant improves life in the country.

- a) Discuss biogas as a renewable form of energy.
- b) Discuss waste management and scientific disposal.
- c) Discuss anaerobic digestion: Science behind it.
- d) Discuss how the biogas digester works.
- e) Discuss organic fertilizer from biodigesters and how it is superior to composting.

Demonstration of biogas plant.

This experiment lets students observe biogas being produced from organic matter.

MATERIALS PROVIDED:

- Student Handout: “Diagram of Biodigester” (one copy per student)
- Biodigester in school.
- All the required discussion material.



Biodigester-Three Benefits

1. Swachh Bharat:

Scientific Disposal of organic waste helps in keeping the surroundings

- Clean
- Neat
- Healthy environment
- Pollution free
- Nil garbage on roads and public places
- Zero emission of methane gas into air

LET US RECYCLE FOR A CLEAN INDIA

2. LPG-Saving:

- LPG supply chain management cost is very heavy and tough to handle logistics.
- Governments are facing problems to provide subsidized domestic gas cylinders and incurring heavy expenditure.
- Biodigesters provide clean and green energy addressing this major problem effectively.
- Biodigesters save 60% to 70% usage of LPG when used effectively.
- Biodigesters reduce financial burden on Governments and also individuals.

USE BIOGAS - GIVE UP LPG SUBSIDY

3. Organic Fertilizer: (Avoid Chemical Fertilizer)

- A biogas plant is a small fertilizer factory under the control of the individual or farmer to provide him with readymade good quality manure to reduce dependence on expensive, imported fertilizers.
- Anaerobically digested organic matters have superior nutrient qualities compared to the usual organic fertilizers.
- Peepal digester effluent act as a soil conditioner, improves filth, water holding capacity, aeration and promotes the growth of beneficial organisms and maintains soil fertility.

ORGANIC FERTILIZER-GOOD FOR SOIL, GOOD FOR YOU

www.peepalindustries.com

Think Green...Think Clean...Think Peepal...!

Biodigester



No chemical fertilizer



PEAS Conference at ACTS – Bangalore

Educating children on waste management and anaerobic digestion.



INSTALLATIONS OF BIODIGESTERS AT DIFFERENT SCHOOLS

Timpany School, Gajuwaka, Vishakhapatnam



Timpany School (CBSE), CBM compound, Vizag



Timpany School (ICSC & ISC), Asilmetta, Vizag



VRS & VJR Residential School, Bachupally, Hyderabad

