

# YES PROGRAMME

## RUBBER TILE TECHNOLOGY

By Jayashree VJ  
Shruthi S  
Sadhana Bhat K

**MENTOR: MRS. KAVERI HARIHARAN**

# INTRODUCTION

## AIM:-

- To protect, conserve and save the environment.
- Rubber waste is non-biodegradable. It also harms the environment and the living beings adversely. So, it becomes essential that we reuse and recycle rubber waste to produce necessary and useful products.

## MATERIALS REQUIRED:-

- Rubber waste(erasers) , winter green oil, metal plate, scrap steel pieces , syringes, blower, wooden block, screw, glue gun, connecting tubes, tube connectors , mould, Bunsen burner , containers, tray, hand drill,



# THE RUBBER PASTE

- The rubber is cut into small pieces.
- It is soaked in winter green oil overnight to soften it.
- The pieces are then blended using a hand drill.
- The paste is a semi solid.
- The soft paste is then heated on the Bunsen burner to dry it and harden it.

HEATING THE RUBBER PASTE IN CHEMISTRY LAB



# CONSTRUCTION OF HYDRAULIC PRESS

- Scrap steel pieces are welded together and attached to a wooden block using screws to make the stand.
- 6 syringes are inverted and attached together and stuck to the centre of the stand using glue gun.
- The syringes are connected to the blower using tubes and connectors.
- A metal plate is stuck to the base of the set of syringes to make the press.
- All the air spaces are blocked using fevi-kwik and M-seal.



# WORKING

- The rubber paste is poured into the mould.
- The mould is kept on the wooden block right below the metal plate.
- Water is partially filled in the tubes.
- When the blower exerts a pressure, the syringes push the metal plate downward.
- Pascal's law is used in the press.

**PASCAL'S LAW**:- A change in pressure at any point in an enclosed fluid at rest is transmitted undiminished to all points in the fluid.

- The metal plate then compresses the mould into a rigid structure.
- It is then frozen for a few hours to harden.
- The tile is ready.



# ADVANTAGES

- One of the best way to reuse rubber waste, conserve the environment and fulfill the needs of urbanization.
- Rubber is slip resistant, non conductive, durable and also a good absorbent.
- Natural resources are saved for future.
- Low maintenance is required.
- Rubber is also sound absorbent. It's natural elasticity can also reduce noise from walking and rolling carts by up to 18 decibels.
- Efficiency of hydraulic press is higher.



**THANK YOU!!!!**

