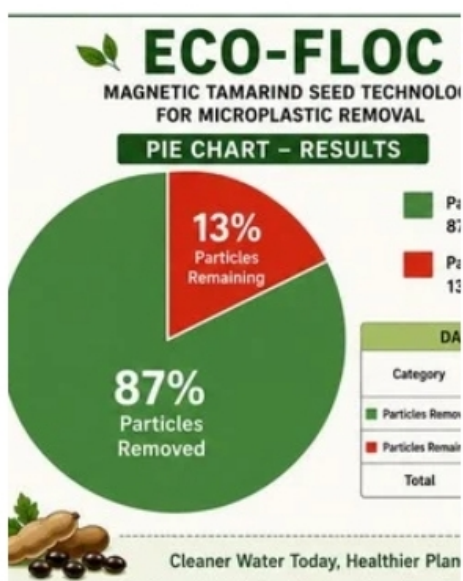
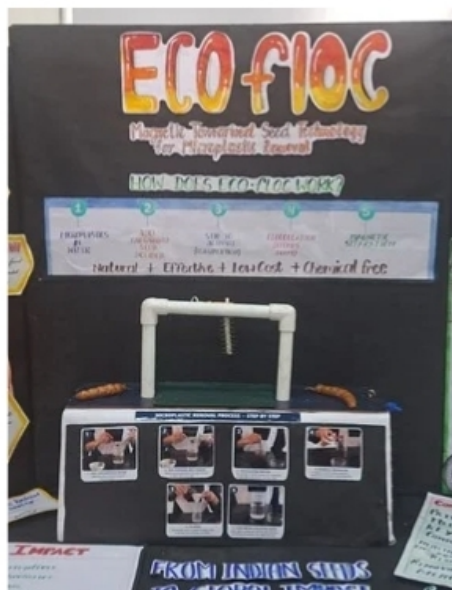
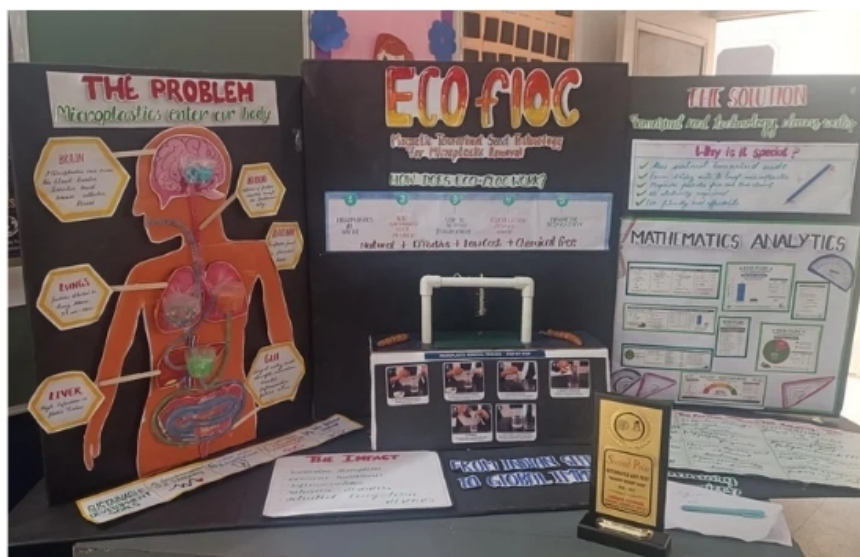


Club project spotlights :

- Project Name: ECO-FLOC
- Theme: Microplastic Removal from Water
- Made using: Tamarind seed polysaccharide and magnetic iron particles.



• “ECO-FLOC taught us how science, teamwork, Student Voices : and innovation can turn a natural resource into a sustainable solution for removing microplastics from water.”



Project Goals:

- To spread awareness about microplastic pollution in water.
- To develop a natural and low-cost method for removing microplastics.
- To understand the role of tamarind seed polysaccharide in microplastic removal.
- To explore magnetic separation as an efficient purification technique.

Process/ Steps:

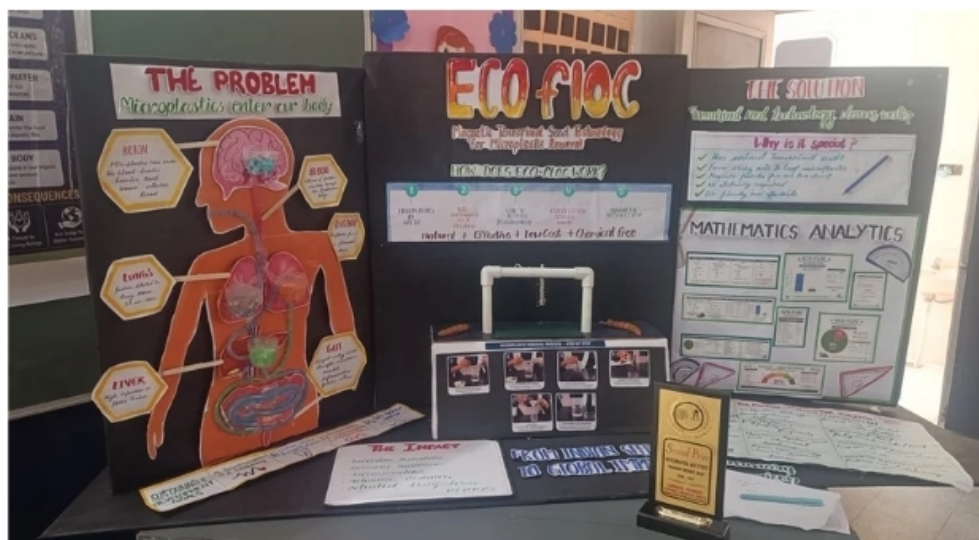
- Collected and prepared tamarind seed powder.
- Extracted the natural polysaccharide from tamarind seeds.
- Added the polysaccharide to microplastic-contaminated water.
- Allowed polymer bridging and flocculation to occur.
- Added magnetic iron particles to make the flocs magnetically separable.
- Separated the microplastic-containing flocs using a magnet.
- Observed and recorded the purification results

Skills Learned :

- Creativity and scientific model designing.
- Teamwork and communication.
- Problem-solving and experimentation.
- Understanding of natural polymers and flocculation.
- Basic knowledge of magnetic separation.
- Awareness about water pollution and environmental protection.

Challenges and solutions :

- Challenge: Difficulty in getting proper flocculation.
- Solution: Experimented with the quantity and mixing of tamarind seed polysaccharide.
- Challenge: Separating the flocs efficiently.
- Solution: Used magnetic iron particles to make the flocs easier to collect.
- Challenge: Understanding the purification mechanism.
- Solution: Researched the role of polysaccharides, polymer bridging and magnetic separation.



Meet the Team :



Manyaveer Kaur
XII A



Isharjot Singh
X E



Harsimrat Kaur
IX G



Jaisika
IX G



Gurhsaan Singh
IX F



Jagjot Singh
IX F



Brahmleen Kaur
IX E



Gurleen Kaur
IX - E