



CITPEELS NATURALS

Turning Waste into Wisdom

Bio-Enzyme Workshop Proposal 2025-26

Prepared by
CitPeels Naturals Pvt Limited





Table of Contents

- 1 Overview
- 2 Company Introduction
- 3 Program Objectives
- 4 Expected Deliverables
- 5 Methodology & Approach
- 6 Program Timeline
- 7 Activity Plan
- 8 Contact Information



Overview

CitPeels proposes a school workshop series designed for Classes 6-12 that combines science, sustainability, and experiential learning. The program helps students understand how organic kitchen waste can be converted into useful bio-enzyme cleaners through fermentation.

The workshops are aligned with India's National Education Policy 2020, CBSE's Skill Education requirements, and the Sustainable Development Goals, particularly SDG 4, SDG 12, and SDG 13. Students gain hands-on scientific experience while developing environmental awareness and problem-solving skills.

NEP 2020 Compliant

CBSE Skill Both Aligned

Zero-Waste Activity

Experiential Learning

Competency Based

SDG 4 · SDG 12 · SDG 13





Company Introduction

About Us

Cit-Peels Naturals Pvt. Ltd. transforms citrus fruit waste into eco-friendly, non-toxic cleaning solutions using a proprietary bioenzyme fermentation process. The company aims to reduce chemical pollution and agricultural waste while delivering sustainable cleaning products for homes and businesses.

Proven Impact: Over 15 successful workshops conducted, empowering 500+ students with high-quality sustainability education.

Academic Alignment: Curriculum seamlessly complements NCERT Chemistry, Biology, and Environmental Science topics for integrated learning.

Science-First Approach: Expert-led biotechnology instruction specializing in the 90-day fermentation cycle and 100% natural science.





Program Objectives

Scientific Understanding

Build a strong foundation in bio-enzymes, fermentation, microbes, and environmental chemistry.

Sustainability Awareness

Help students understand the environmental impact of chemical cleaners and the value of natural alternatives.

Hands-On Learning

Enable students to create and observe their own bio-enzyme through practical experimentation.

Innovation & Problem Solving

Encourage students to think creatively, collaborate, and design sustainable solutions for real-world challenges.



Expected Deliverables

Workshop Component	Included in Classes 6–8	Included in Classes 9–12
Live educator-led workshop session	✓	✓
Fermentation materials (fruit peels, jaggery, water, bottles)	✓	✓
Take-home bio-enzyme starter kit for every student	✓	✓
Observation journal for 90-day fermentation cycle	✓	✓
Curriculum reference sheet mapped to school syllabus	✓	✓
Participation certificate	✓	✓
NEP 2020 and SDG compliance documentation	✓	✓
QR code access to post-workshop digital resources	✓	✓
pH testing strips and basic lab instruments	—	✓
Sustainability and innovation challenge	—	✓
Group pitch session on eco-friendly product ideas	—	✓
Opportunity for winning team to be featured on CitPeels social media	—	✓



Methodology & Approach

Awareness and Engagement

Compare chemical cleaners with bio-enzymes.

1

Scientific Understanding

Learn the science of fermentation.

2

Hands-On Activity

Make and take home a bio-enzyme bottle.

3

Reflection and Innovation

Reflect and create sustainable ideas.

4



Program Timeline

Stage	Classes 6–8: Young Scientists Lab (2 Hours)	Classes 9–12: Bio-Enzyme Deep Dive (3 Hours)
Introduction	What is a bio-enzyme and how fruit peels, jaggery, and water create a natural cleaner	Introduction to fermentation science and the role of enzymes and microbes
Core Learning	Learn the 1:3:10 ratio and basic measurement through hands-on mixing	Study amylase, protease, lipase, microbes, and fermentation phases
Scientific Concept	Understand CO ₂ bubbles and the 90-day fermentation journey	Explore pH, acetic acid, preservation, and the chemistry of acidic solutions
Sustainability Awareness	Compare chemical cleaners with natural bio-cleaners and understand why they matter	Connect biotechnology, green chemistry, and circular economy principles
Activity / Lab Session	Prepare a personal bio-enzyme bottle to take home	Brew a batch, perform pH testing, and analyze the reaction scientifically
Innovation & Impact	Observe the fermentation process at home over 90 days	Calculate environmental impact and develop sustainable product ideas
Closing Outcome	Receive a starter kit and begin the observation cycle	Present ideas through a group pitch and sustainability challenge



Activity Plan

Time	Classes 6–8: Young Scientists Lab (2 Hours)	Classes 9–12: Bio-Enzyme Deep Dive (3 Hours)
0:00 – 0:20	The Big Why Hook: Compare a chemical cleaner with a bio-enzyme jar to spark curiosity and discussion.	Industry Reality Check: Decode cleaning product ingredients and understand their environmental impact.
0:20 – 0:45	What Lives in Your Kitchen Waste: Introduce microbes, fruit peels, jaggery, and the 1:3:10 ratio; students begin mixing their bottles.	Biochemistry Deep Dive: Learn about enzymes, fermentation phases, pH changes, and related NCERT concepts.
0:45 – 1:15	The 90-Day Journey: Animated explanation of fermentation, CO ₂ bubbles, and daily bottle care.	Hands-On Lab: Brew & Measure: Students prepare their own batch and test the pH of ready samples.
1:15 – 1:40	Live Cleaning Demo: Compare the cleaning ability of bio-enzyme and chemical cleaner on an oily surface.	Sustainability Math & Biotech Careers: Calculate environmental impact and explore green chemistry career pathways.
1:40 – 2:00	Take Home + Q&A: Students label and take home their bottle along with an observation journal.	Group Innovation Challenge: Teams design and pitch a sustainable bio-enzyme product idea.
2:00 – 2:50	–	Continue group activity and presentations; winning idea selected for feature on CitPeels social media.
2:50 – 3:00	–	Certificate + Debrief: Certificates distributed and QR code shared for digital learning resources.



Contact Information



CitPeels Naturals Pvt Limited

IIT Ropar Main Campus,
Rupnagar, Punjab, India

EMAIL

contact@citpeels.in

WEBSITE

<https://citpeels.in/>

PHONE:

+91 9389490230



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The End

Thank You

Prepared by
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