

STEM PROJECT

Sustainable Mushroom Cultivation Using Farm Waste

STEM Project is a thoughtfully curated sustainability initiative where science meets purpose. Through this project, students explore the fascinating world of fungi while developing a deeper understanding of environmental responsibility and eco-friendly innovation. By integrating biology, chemistry, environmental studies, and analytical thinking, learners discover how scientific knowledge can transform everyday agricultural waste into meaningful, sustainable outcomes.



More than an academic exercise, the project nurtures a mindset of innovation—encouraging students to think beyond textbooks and recognize their role as responsible, future-ready citizens. It is a journey that transforms curiosity into creativity, learning into action, and science into sustainability.



Throughout the project, interdisciplinary integration and experiential learning remain central, empowering students to develop critical thinking, collaboration, and eco-conscious decision-making skills aligned with the vision of modern STEM education

OCTOBER

THEME & FOCUS

ORIENTATION, AWARENESS & SCIENTIFIC FOUNDATION



Students are oriented towards the project vision, sustainability goals, and real-world relevance. They explore the importance of agricultural waste management, basic understanding of fungi, and environmental responsibility through discussions, demonstrations, and guided observations.



SKILLS & COMPETENCIES DEVELOPED

- Scientific curiosity
- Environmental awareness
- Observation skills
- Safety Consciousness



Interdisciplinary Integration

Biology: Introduction to fungi and ecological roles
Chemistry: Understanding basic scientific parameters
EVS: Recycling, waste utilization, sustainability

NOVEMBER

THEME & FOCUS

Application, Observation & Data Understanding

Learners actively engage in monitoring, recording observations, and maintaining documentation.

Emphasis is placed on hygiene awareness, consistency, patience, and understanding how environmental factors influence biological systems.

Data is recorded and represented visually to promote analytical thinking.



SKILLS & COMPETENCIES DEVELOPED

- Data handling
- Analytical thinking
- Scientific discipline
- Responsibility & consistency
- Problem awareness



Interdisciplinary Integration

Biology: Growth patterns and biological responses

Mathematics: Data recording, graphing, trend analysis

Chemistry: Clean practices and control concepts

DECEMBER

THEME & FOCUS

Outcome Analysis, Sustainability Reflection & Communication



Students analyze outcomes, reflect on sustainability impact, and understand the value of eco-friendly practices. The project concludes with collaborative presentations, visual documentation, and reflective discussions connecting learning to future applications.

SKILLS & COMPETENCIES DEVELOPED

Interdisciplinary Integration

Biology: Completion of life cycles

EVS: Sustainable food practices

Communication: Presentation and articulation skills



- Critical reflection
- Presentation skills
- Confidence building
- Sustainability mindset
- Documentation & reporting
- Data handling
- Analytical thinking
- Scientific discipline
- Responsibility & consistency
- Problem awareness

TEAM REFLECTION – A JOURNEY OF GROWTH



Beyond circuits and code, this project taught our students the value of collaboration, patience, and resilience. They learned how to debug real hardware, think critically during failures, communicate effectively, and convert ideas into working solutions. The journey strengthened their technical confidence and deepened their belief that innovation can solve everyday problems. Their dedication is a proud achievement for both the team and the school.

FINAL OUTCOME

