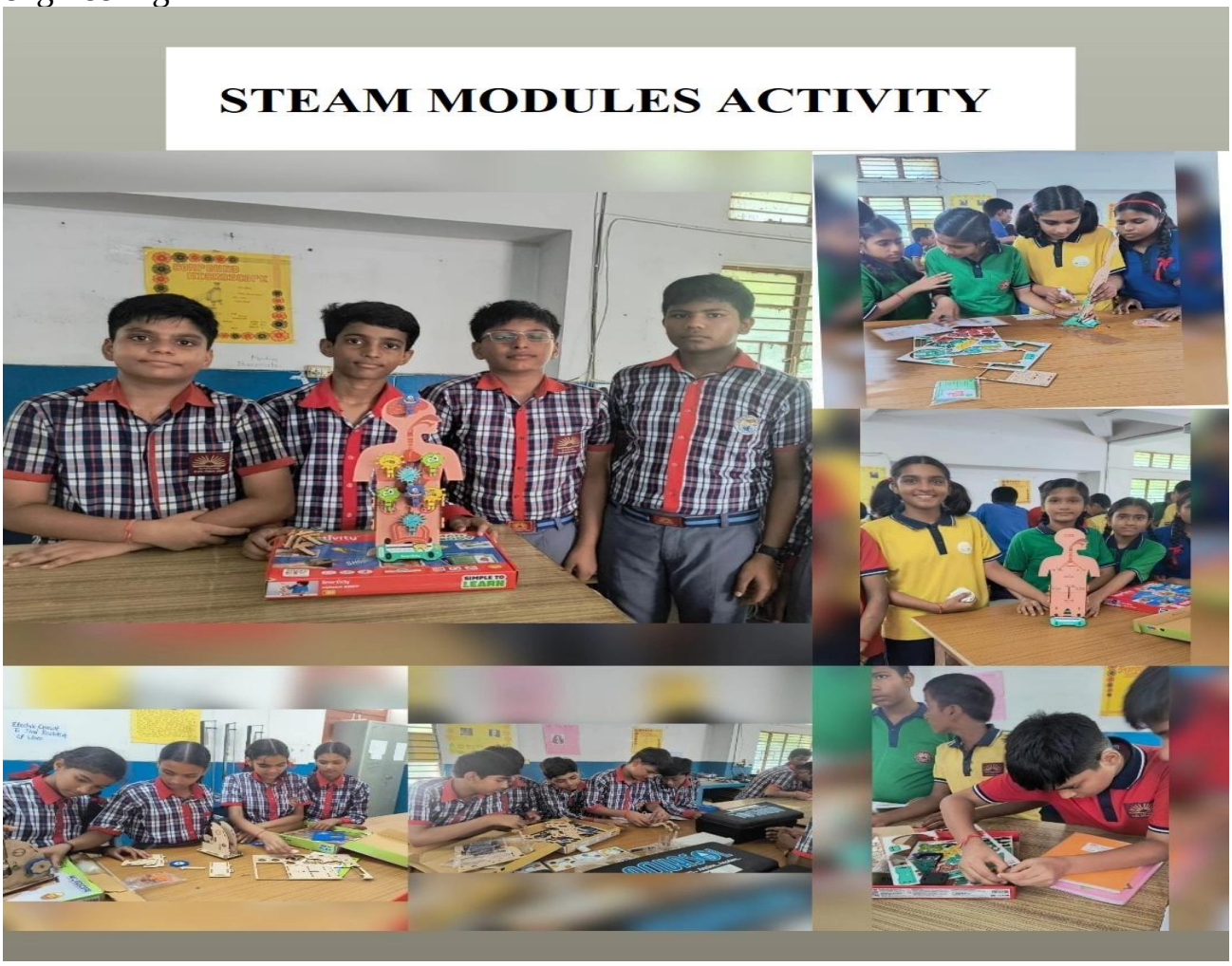
PM SHRI KENDRIYA VIDYALAYA MAU
REPORT OF AUGUST 2024
(SCHOOL OF INNOVATION COUNCIL)

1. Introduction
This report provides an overview of student activities involving steam modules—working telescopes, microscopes, body organ models, and hydraulic JCB models—as well as soil testing kits. It highlights how these activities have contributed to the development of scientific temperament among students under the Pradhan Mantri Schools for Rising India (PM SHRI) initiative.

2. Overview of Steam Modules and Soil Testing Kits
2.1. Types of Steam Modules Implemented
- **Telescopes:** For exploring astronomical concepts.
- **Microscopes:** For studying microscopic organisms and structures.
- **Body Organ Models:** For understanding human anatomy.
- **Hydraulic JCB Models:** For learning principles of hydraulics and mechanical engineering



2.2. Soil Testing Kits

- **Purpose:** To analyze soil quality and understand agricultural science.
- **Usage:** Integrated into science curriculum for practical learning and environmental education.

3. Student Activities and Projects

3.1. Working Telescopes

Activities:

- How to see celestial objects.
- Creating star maps.
- Conducting group discussions on astronomical phenomena.

Outcomes:

- **Curiosity:** Increased interest in astronomy and space science.
- **Critical Thinking:** Improved observational skills and data recording
- **Observation in Progress:** Students use of telescopes to view planets and stars.
- **Star Maps Presentation:** Students presenting their star maps and findings

3.2. Microscopes

Activities:

- Examining samples of plants, insects, and microorganisms.
- Preparing and analyzing microscope slides.
- Creating detailed reports on observations.

Pictures: 

- **Microscope Examination:** Students preparing slides and using microscopes.
- **Report Presentation:** Students sharing their findings from microscope observations.

Outcomes:

- **Attention to Detail:** Enhanced understanding of microscopic life and structures.
- **Scientific Method:** Improved skills in sample preparation and analysis.

3.3. Body Organ Models

Activities:

- Assembling anatomical models of human organs.
- Learning about organ functions and systems.
- Conducting experiments related to organ functions.

Pictures: 

- **Organ Assembly:** Students assembling and studying body organ models.
- **Function Demonstration:** Students demonstrating organ function experiments

Outcomes:

- **Knowledge Acquisition:** Greater understanding of human anatomy and physiology.
- **Practical Application:** Applied theoretical knowledge through hands-on activities.

3.4. Hydraulic JCB Models

Activities:

- Building and operating hydraulic JCB models.
- Understanding principles of hydraulics and mechanical systems.
- Designing and testing modifications to improve performance.
- **Model Construction:** Students building hydraulic JCB models.
- **Hydraulic Operation:** Students operating and testing their JCB models.

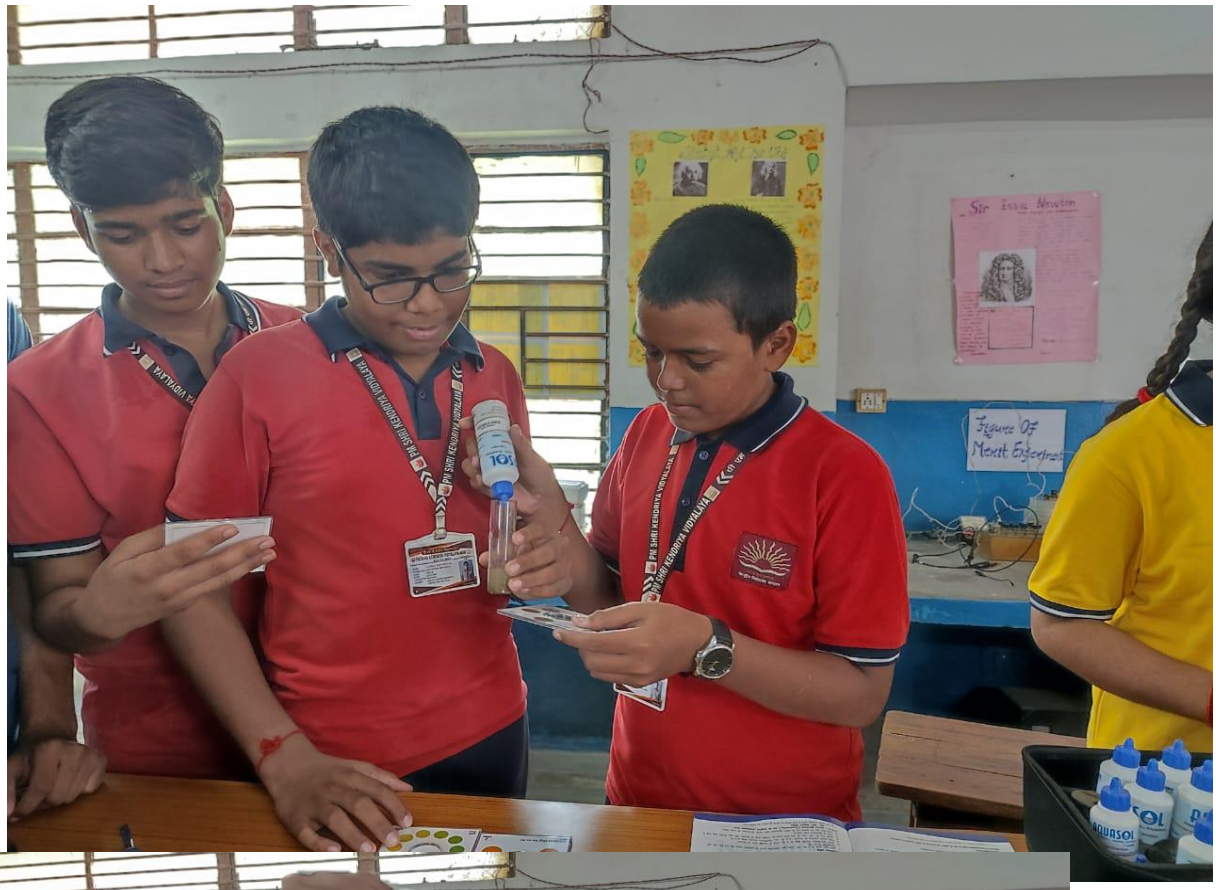
Outcomes:

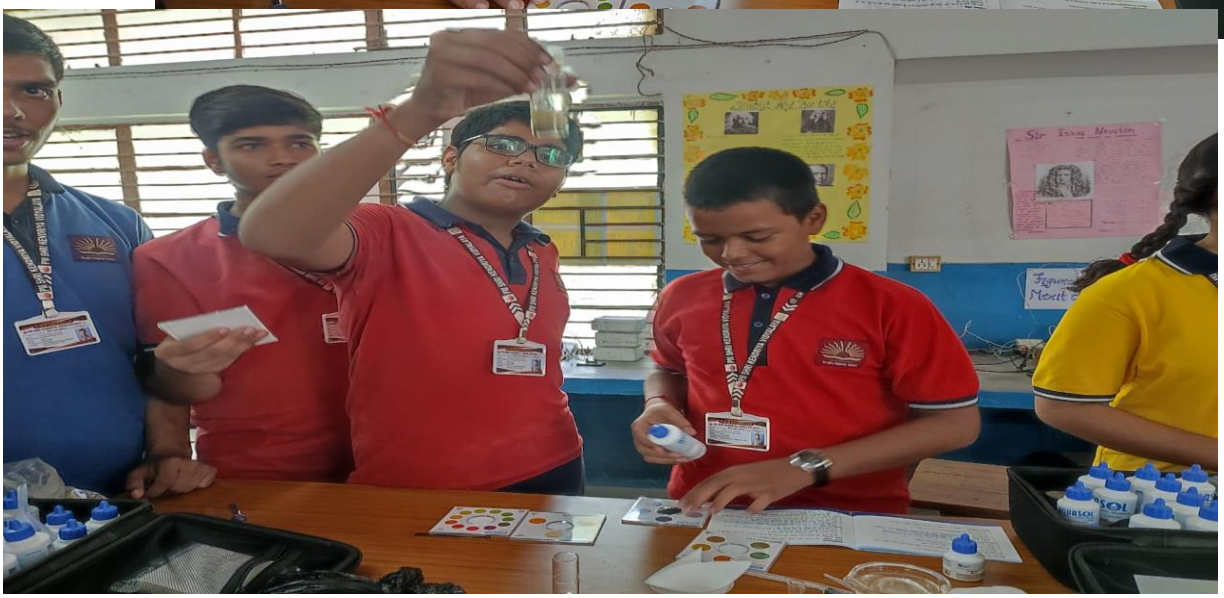
- **Engineering Skills:** Improved understanding of mechanical systems and fluid dynamics.
- **Problem-Solving:** Enhanced skills in troubleshooting and optimizing mechanical designs.

3.5. Soil Testing Kits

Activities:

- Collecting and analyzing soil samples.
- Understanding soil composition, pH levels, and nutrient content.
- Conducting experiments on soil quality and its impact on plant growth.





- **Soil Sample Collection:** Students collecting soil samples from various locations.
- **Soil Testing Analysis:** Students analyzing soil samples with testing kits.

Outcomes:

- **Environmental Awareness:** Increased understanding of soil health and its importance in agriculture.
- **Practical Skills:** Enhanced skills in soil analysis and environmental science.

4. Development of Scientific Temperament

4.1. Curiosity and Exploration

- **Activities:** Hands-on projects encouraged students to explore scientific concepts actively.
- **Inquiry-Based Learning:** Promoted independent questioning and experimentation.

4.2. Analytical and Critical Thinking

- **Data Analysis:** Students improved their ability to analyze and interpret scientific data.
- **Problem-Solving:** Activities fostered skills in troubleshooting and refining experiments.

4.3. Collaboration and Communication

- **Team Projects:** Many activities involved teamwork, enhancing collaboration skills.
- **Presentations:** Students improved their ability to communicate scientific findings effectively.

4.4. Appreciation of Science

- **Increased Interest:** Activities led to a heightened interest in science and potential STEM careers.
- **Future Aspirations:** Students expressed interest in pursuing further studies and careers in science and engineering.

5. Teacher Feedback

5.1. Observations

- **Engagement:** Teachers noted high levels of student engagement and enthusiasm.
- **Learning Outcomes:** Significant improvement in understanding and practical application of scientific concepts.

5.2. Suggestions

- **Resource Expansion:** Additional modules and activities to cover a broader range of scientific topics.
- **Professional Development:** Continued training for teachers to integrate modules effectively

6. Conclusion

The integration of steam modules and soil testing kits has significantly contributed to the development of scientific temperament among students. Through engaging, hands-on activities, students have enhanced their understanding of scientific principles, developed critical thinking and problem-solving skills, and fostered a greater appreciation for science. Continued support and expansion of these activities will further promote scientific education and curiosity.