Mobile Science Laboratory (M S L)

M S L is a project aimed at preparing movable scientific laboratory to build up and develop the future Indian Students' mind in various science fields.

M S L will be well equipped for demonstrating various aspects of analytical sciences. The objective is to reach out to students and schools who do not have Science Laboratory. It will be utilized to impart the scientific knowledge to a number of needy students and at a minimal cost.

- **Need**

Laboratories are real places for teaching and learning science. They provide students with opportunities to solve the real problems and develop clear understanding. Everyone acknowledges the need for better education in science. It is generally observed that many children lose their interest in science before they enter middle school. Since the teachers are not groomed properly, they fail to inspire their students as well.

- **Concept**

Science is either taught by memorization of notes dictated by the teachers. Very few teachers are prepared to instill in their students the importance and wonders of science, or the nature of science as a "correct way of thinking" that is required to succeed in our increasingly scientific and technological world.

M S L focuses on science content and effective instructional strategies, infused with the concept of inquiry learning.

M S L focuses on gaining knowledge through research. Scientific learning is tied directly to state learning standards (Essential Knowledge and Skills) and is scheduled so that teachers have time to take up new concepts and design ways to transfer the essential concepts to their students on a regular basis.

What is MSL?

A custom built vehicle, with the required Laboratory equipment pertaining to Physics, Chemistry, Biology, Zoology, Geology and Astronomy. Chemicals, charts, scientific videos, LCD, Computer, books etc. will be provided. This vehicle will be driven to schools, with 2 science teachers, a coordinator, and a driver with helper.

OBJECTIVE

- Primary:
    - To develop in depth understanding of concepts
    - To learn to apply concepts learned in the class to new situations
    - To experience basic phenomena –first hand - to clear basic concepts and doubts
    - To develop critical and qualitative thinking
    - To develop experimental and data analysis skills
    - To learn to use scientific apparatus
    - To learn to estimate statistical errors and recognize systematic errors
    - To develop reporting skills (oral and written)

- Secondary:
    - Producing an exemplary science education program is to facilitate the teacher to have access to research-based student learning experiences and *vice versa*, that will incorporate best practices in teaching science to students.
    - Qualitative approach

IDENTIFIED FIELDS

- Critical and Creative Thinking
- Training both learners and educators
- Scientific Research