

Science Centre World Summit – 2017

Connecting the World for a Sustainable Future



Anurag Kumar

Curator

National Science Centre, Delhi
National Council of Science Museums,
India

Can We Stop the Use of Technology For Sustainable Development?

"The transformative power of science, innovation and technology is abundantly clear. Thus it is that we – the international community – must take the necessary steps to ensure that the potential inherent in exponential technological innovations is unlocked to our advantage. Properly done, these steps will take us to the solutions required to drive achievement of all 17 Sustainable Development Goals by 2030,"

Peter Thomson

President of the General Assembly of United Nations
September 2016 to September 2017



So, What is the Solution?

- To innovate such technologies which not only make our life comfortable but also protect our environment.
- To focus on the local needs and conditions rather than looking for global commercial market.
- This can happen only if we encourage local innovation.



The Story of Suman Bai

The Magic of Five Leaves

Sumanbai, a farmer in a remote tribal village in Madhya Pradesh, has found a low cost, environment friendly alternative to toxic pesticide for her crops.



Indian Education System

State of science as well as school education in India during 1900-1947



Indian Education System

- Science education in India post independence
- Laboratories have declined,
- Demonstrations are now confined to elite schools.
- Factual information dominates the syllabi.
- No activity, no labs.



The Decade of Innovation

Realizing that innovation is the engine for the growth, prosperity and sustainable development in the 21st century, the then President of India, Dr A P J Abdul Kalam had declared 2010 as the 'Decade of Innovation'



The Decade of Innovation

- National Council of Science Museums, India has been given the task to set up 60 'Innovation Hubs' by 2019.
- It has already setup 20 such hubs,
- 2 are ready for opening
- Work is going on for 29 more.



Innovation Hub Objectives

- Engage our youth in creative hobbies & activities in STEM & Biotechnology
- Promote their critical thinking and practical problem solving skills
- Support their Idea to come to fruition
- Recognize, encourage and facilitate local innovation for Sustainable Development.

....To inspire youth to make innovations



Components of Innovation Hubs

Hall of Fame



Tech Lab



Biotech Lab



Science Models



Investigative projects



Innovation Resource Centre



Thod Phod Jod



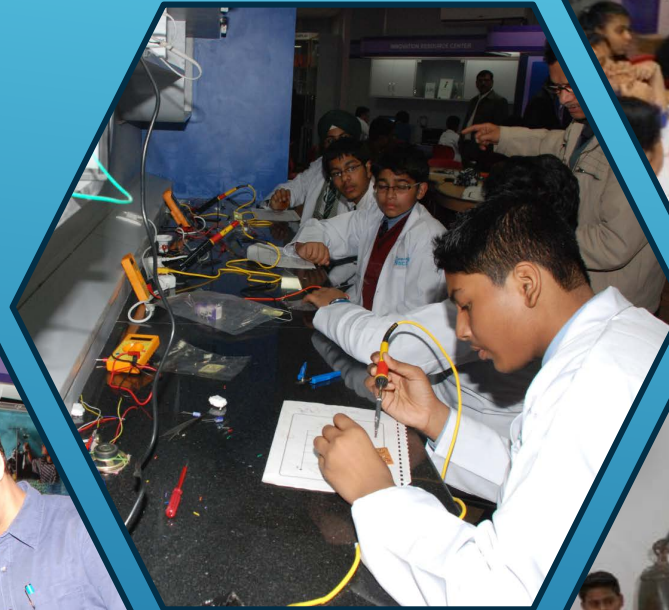
Kabad se Jugad



Inculcating the Culture of Innovation

Nurturing Engineering Skill

Tools Operation Workshop



Electronics



Electrical



Machining

Inculcating the Culture of Innovation

Supporting Science Education

Popular
Science Lecture



Robotics

Biotech



Basic Science

Updating with Technology

Quadcoptor



Galileo Board



Lego Kits



3D Printer



Spectrophotometer



Thermal Cycler



Mentor Training Program

Training the trainers



Innovative Projects

1. Hydrogen gas car from electrolysis of water
Nehru Science Centre, Mumbai
2. Mechanical flip book
Regional Science Centre, Guwahati
3. Septabin
National Science Centre, New Delhi
4. Composites of Natural rubber and polymer with biodegradable substances
Regional Science Centre, Calicut
5. Dissolving Styrofoam in a suitable solvent
Regional Science Centre, Calicut
6. Preparation of Super Absorbent using Orange Peel
National Science Centre, New Delhi



Innovative Projects

1. The Project that got International Recognition

Projects:

1. Portable Micro Generation System for charging electronic gadgets
2. Novel way to use vibrations for power generation

Harsh Kumar, at Visvesvaraya Industrial and Technological Museum, Bangalore



Innovation Festival

Challenges



A Local Technician



Senior Citizens



Farmers



Robofest



Family Quiz



National Council of Science Museums, India



National Science Centre, New Delhi



