

# Invention and Sustainability Education Programme (ISEP)



# Invention and Sustainability Education Programme- ISEP

1. Launched in 2013 by SELCO Foundation, is one among many interventions in the skill and capacity enhancement portfolio
2. This programme is primarily a student engagement initiative, designed to create future thought leaders, innovators and entrepreneurs who keep social and environmental sustainability at the core of their thinking and who can contribute their efforts to build sustainable and inclusive communities
3. ISEP also engages with school teachers, training them on how to enculcate the idea of sustainability among children through their coursework
4. ISEP includes different teaching-learning methodologies like experiment and activity based learning tools
5. It has a rich and diverse content mapped to the state syllabus



# Capability Development Goals of the Programme

ISEP's goal is to enable the students to develop capabilities in the following areas:

1. Conceptual understanding,
2. Clarity of thought,
3. Identifying root causes of problems,
4. Thinking about solutions,
5. Empathy, communication and collaboration,
6. Leadership and
7. Advocacy for improvement of human conditions.



# Expected outcomes

1. Increased conceptual understanding of sustainable development and climate change
2. Increased sustainability consciousness related to energy conservation, water conservation, sustainable agriculture, and waste management – includes both cognitive and affective aspects of behavior such as understanding, attitudes and actions
3. Increased incidence of leadership attributes among participating students
4. Increased ability for identifying local issues and being problem solvers
5. Enhanced empathy for nature and local communities facing problems or in crisis
6. Increased incidence of precursors to inventiveness such as tendency to ask questions, level of interest in learning and creating new things and level of curiosity



# Student engagement

1. Grades 6th, 7th and 8th are selected from a particular school for this program
2. Classroom sessions are conducted once a week by trained facilitators who forms the core of ISEP implementation
3. Teaching pedagogies such as experiential learning, activity based learning, inquiry based learning, flipped classroom, cooperative learning are used. While enagement methodologies such as peer instructions, storytelling, nature walks, games, radio clubs, audio visual, role plays, interviews and many more are intriduced from time to time to give an exposure to creative thinking
4. Students go through anywhere between 8-10 sessions in an academic year while also simultenoeuksy working on a project



# Project Work

1. Students simultaneously go through an innovation workshop in groups with nearby schools
2. Workshop is held after the first 2 sessions of the ISEP classes
3. Workshop is focused on developing skills among students to identify, articulate and work on their local issues
4. Students form groups and are assigned a mentor
5. This group of students along with mentor from the organisation and school then work on a project for the rest of the year
6. A makerspace toolkit along with some material procurement fund has to be hosted at the school
7. At the end of the academic year an invention fair is held in the region where all students come and participate to showcase their inventions- it is open for all the students and schools who underwent the ISEP program



# Training of science teachers programme- ToT

- Engaging with teachers to train and build their capacity to be champions of innovation and sustainability education in their institutions
- It feeds into the long term objective of the ISEP
- The efforts are focused to enable the trained teachers to adopt active learning methodologies while imparting lessons on science and sustainability concepts and issues partly aligned to the state syllabi



**Thank you**



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