सत्यमेव जयते

Government of India

28th & 29th NATIONAL CHILDREN'S SCIENCE CONGRESS (2020 & 2021)

रावित्रौसंप NCSTC

A programme of National Council for Science and Technology Communication,
Department of Science & Technology,
Government of India

FOCAL THEME:

Science for Sustainable Living

We are at the crossroads regarding critical and complex ecological challenges, economic stress and social instability at local, regional, national and global scales. Joy of living is disturbed with questions, uncertainties, fear, depression, frustration and envy. Globally, there is an increasing search for alternative ways to design our thought processes and how we live our daily lives; where approach of sustainable living seems to be the only way forward.

Sustainable living pleads for a lifestyle which reduces the impact of human way of life on planet Earth, by cutting down on the use of natural resources, preventing pollution and through judicious decision-making in use of material, energy, transportation, recreation, etc. Here, "sustainable lifestyle" is a cluster of habits and patterns of behaviour embedded in a society and facilitated by institutions, norms and infrastructures that frame individual choices, in order to minimise the use of natural resources and generation of wastes, while supporting fairness and prosperity for all (UNEP, 2016).

Scientific inquiry in the form of exploration, experimentation with proper validation and interpretation helps us in understanding different ways and means to adopt sustainable approaches in daily walk of life. With this perspective the focal theme "Science for sustainable living" would like to systematically use the methods of science for personal and community level decision-making that would lead to establishment sustainable ways of life *(genre de vie)* through improving/upgrading quality of life (QoL), conservation of nature and ecosystem, facilitating energy efficiency and also to achieve equity, equality, happiness, peace and harmony.

A REGENERATIVE APPROACH TO SUSTAINABILITY

Sustainable living is in simple terms making a living with preserving the existing resource base without depleting the current levels and to a great extent generating renewable sources. But taking into account factors such as growing population, negative ecological impacts due to anthropogenic factors such as climate change, there is also a need for regenerating the lost resources to match future demands, even if we limit our consumption levels. Therefore the concept of regenerative sustainability plead for a net-positive approach to sustainability that is based on 'procedural sustainability' through collaborative planning for community development as interpreted by constructive social theory.

It is different from the regenerative development and design approach which is rooted in the notion of ecological worldview of systems that support co-evolution of human and natural systems in a caring and nurturing relationship like parental relationship.

The idea of regenerative suitability approach and regenerative design approach concern for reorientation for reducing harm and damage to produce net-positive outcomes both for environment and human at personal space to neighbourhood space scale.

Therefore, the focal theme proposes to inculcate the idea of regenerative sustainability among the young minds of the country.

OBJECTIVES

Motivate and engage the children for inquiry based learning exercise:

1. To learn and understand ecology, economy and society and their inter-relationships.
2. To apply scientific understanding in day-to-day decision-making
3. To design and develop approach /solution for tapping potentiality and overcoming the gaps and challenges
4. To take Initiatives for personal reflection* and transformation to community and society

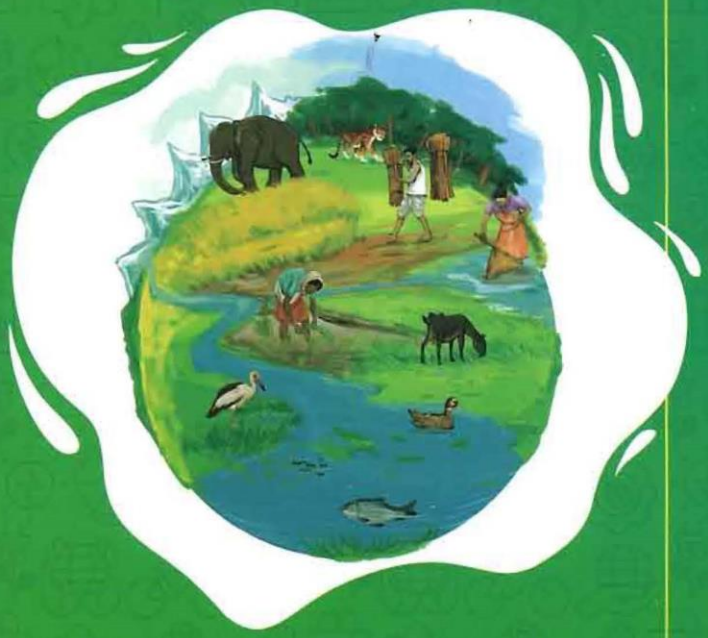
means an opportunity to reconsider events, thoughts and feelings from a fresh perspective

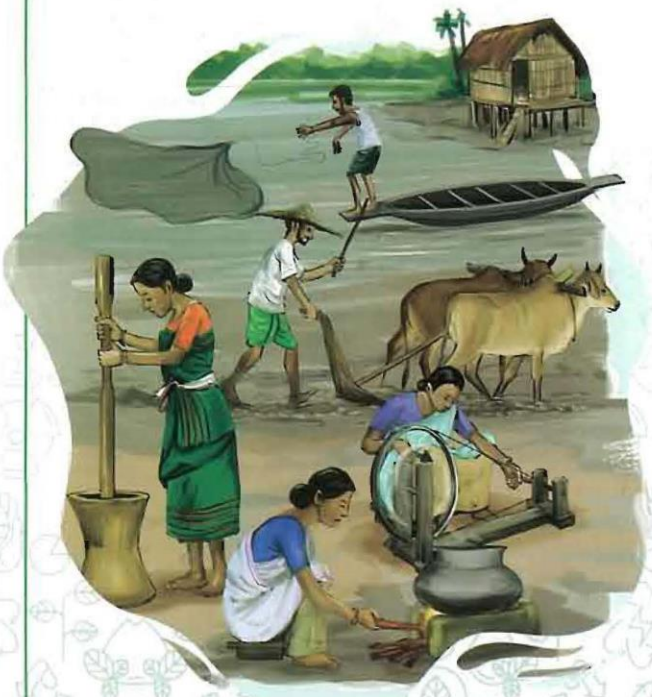
SUB-THEMES

Ecosystem for Sustainable living

Proposed coverage

- Understanding Ecosystem – learning about ecosystem components, their functions and interrelations (both natural and man-made system)
- Exploring diversity of life, its role in ecology, economy and social sustainability
- Impact of human activities on ecosystem
- Conservation of biodiversity and ecosystem
- Natural Resource Management (NRM) for ecological, economic and social sustainability
- Ecosystem approach for sustainable living





Appropriate Technology (AT) for Sustainable living

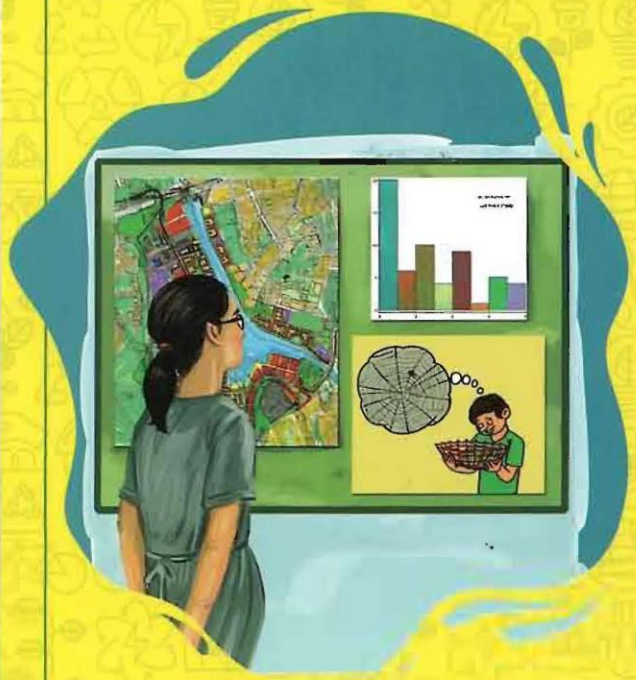
Proposed coverage

- Design and development of AT
- Ecosystem management, Ecosystem based production, NRM
- Responsible Consumption
- Sustainable habitat development
- Management of Human Wildlife Conflict (HWC)
- Harnessing Renewable Energy (RE), achieving energy efficiency etc.

Social Innovation for Sustainable living

Proposed coverage

- Social innovation for security of life, livelihoods, social inclusion, eradicating poverty, promotion of eco-sanitation
- Social innovation for Climate Change adaptation, resilience development, Disaster Risk Reduction
- Social institutional reframing, promoting social inclusion, responsible consumption and management
- Social entrepreneurship



Design, Development, Modelling and Planning for Sustainable living

Proposed coverage

- Defining carrying capacity, threshold limits
- Sustainable production
- Sustainable consumption
- Habitat development
- Transportation system, energy system
- Pollution monitoring-impact assessment
- Natural Resources management
- Farming system design
- Climate change resilience and adaptation, etc.

Traditional Knowledge System (TKS) for Sustainable living

Proposed coverage

- Documentation, validation, improvisation and application of TKS in
  - Ecosystem management
  - Conservation, resource optimization,
  - Energy efficiency
  - System efficiency
  - Promoting growth within and social inclusion

About NCSC

What?

- A forum for children to find logical solution to a problem from their immediate environment and neighbourhood.
- A research platform to encourage enquiry-based learning through keen observation, sense of discovery, creativity and innovation and the process of learning through doing
- Improve problem solving skills through observation, hypothesis formation, framing experiments, data recording, analysis and representation, drawing of inferences and presentation of findings.
- A group of two children work together thus inculcating the spirit of team work.

Who can participate?

- Children in the age group of 10-17 years. However in case of a child with disability, their level of education or mental growth is taken into account. The cut-off date is 31st of December of the year of participation.
- Any child irrespective of language, educational background – whether school going or not, area of participation – Rural or Urban can participate

How?

- You have to identify a problem relevant to your neighbourhood and focal theme and form a two member group
- Discuss the problem with your guide teacher and co-worker
- Carry out a study following the method of science – observation, measurement, analysis, interpretation and problem solving attempt
- Prepare a report of the work for presentation
- Discuss the solution among the people as follow-up of the work.

Where?

- Present your report at the District Level Children's Science Congress
- On the basis of merit and some fixed criteria, projects are selected to be presented at the State Level CSC.
- Similarly, projects are selected for the National Level. However, maximum number of projects is limited to the state quota.

For more details please contact your State Coordinating Agency or write to :

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