

**National Children's Science Congress  
NCSC 2022 – 2023**

**Focal Theme and Sub-themes**

National Children's Science Congress (NCSC), a flagship programme of National Council for Science and Technology Communication (NCSTC), Department of Science & Technology (DST), Government of India, was launched nationwide in 1993, for children of 10-17 years age which includes both regular school-goers, dropouts, children of slum or street dwellers. The programme also provides platform for specially-abled children (*Divyangjan*). It acts as a platform for the children to be rational and apply scientific methods to understand, research and seek solutions for solving local problems in their neighbourhoods.

This inquiry-based learning programme is held every year on a specific focal theme which is continued consecutively for two years, and is decided upon the basic principle of 'Local for Global'. Under the 'new normal' situation following Covid pandemic the UNO has declared 2021-2030 as the UN Decade on '*Ecosystem Restoration*' within existing structures and available resources considering its commitment to human well-being, biodiversity conservation and achieving Sustainable Development Goals. Keeping this declaration as well as consequences in view, the focal theme of NCSC 2022 & 2023 has been decided as-

**UNDERSTANDING ECOSYSTEM  
FOR HEALTH AND WELL-BEING**

Ecosystems are the planet's life-support systems not only for humans but also for all other life-forms. Human survival has fundamental needs for food, water, clean air, shelter and regulated climatic condition. Other benefits derived from an ecosystem include full complement of species, intact watersheds, climate regulation and genetic diversity. Stress of any form on ecological balance, biodiversity, freshwater sources, food-producing systems and climate regulation cause major adverse impacts on health and well-being. Therefore, understanding ecosystem as life-support-system in terms of its components, interrelationships among the components, role and functions of abiotic and biotic factors, significance of food chain, energy dynamics, ecological services, biodiversity (genetic and species varieties) are very important to develop ecological literacy. Moreover, understanding human impacts on ecosystems affecting health and well-being are also quite important. It is essential to know how our activities disturb the ecosystem functions leading to various negative impacts on health and overall well-being. Hence, our daily activities at all levels need rectification and re-designing to reduce the negative impacts on ecosystem and thereby achieving ecosystem sustainability, health safety and security as well as well-being for all.

The focal theme will focus on the major following aspects by engaging children for inquiry-based learning applying methods of science in their own local contexts:

- Exploring and understanding ecosystem(s) in their neighborhoods and taking initiatives for ecosystem conservation and restoration;
- Making inquiry into the interlinkages of ecosystem with health, nutrition and well-being along with their implications;
- Taking initiatives for experimentation, based on ecosystem approach, for local level natural resource management, farm and non-farm-based production, and finding out ways for food, nutrition and livelihood security, health safety, and developing resilience and adaptation towards climate change and disaster risk reduction.
- Looking into innovative S&T solutions for ecosystem conservation and restoration, nutrition and health safety.

Keeping these major focuses in view, the focal theme has been divided into the following five sub-themes:

### **Sub-theme I: Know your ecosystem**

Broadly, this sub-theme will encourage the children to explore, identify and carry out studies on the ecosystem(s) in their neighbourhoods to know about its different components (abiotic and biotic), their inter-relationship, functions, role of certain species in the ecosystems, association of biodiversity with the ecosystems, ecological services, human dependency on the ecosystem(s) and impact of human activities on the ecosystem(s).

### **Sub-theme II: Fostering health, nutrition and well-being**

This sub-theme will inspire the children to make scientific inquiry, in their own localities, about situation of health (both human and animal), nutrition and well-being and will also encourage them to make efforts to identify ways and means to fortify and foster the situation ensuring health safety and security, nutritional security and well-being at individual, family and community levels.

### **Sub-theme III: Social and cultural practices for ecosystem and health**

Under this sub-theme children will be inspired to identify, document and validate local socio-cultural practices in their local contexts evolved over a period of time for the protection of ecosystems and their associated services, sustainability, conservative nature way and means such knowledge systems got transferred from one generation to another.

#### **Sub-theme IV: Ecosystem based approach (EBA) for self-reliance**

Children, under this sub-theme, will get scope to identify the prospects and study / explore how integrated management of land, water and living resources promotes conservation and sustainable use in an equitable way. Children can also study the wide range of ecosystem management activities that increase the resilience and reduce the vulnerability of people and the environment to climate change. Various approaches based on different ecosystems can be studied and explored by children under this sub-theme.

#### **Sub-theme V: Technological innovation for ecosystem and health**

This sub-theme will encourage children to find local-level problems and take initiatives for developing local technological solutions from the perspectives of green technology, appropriate technology, information and communication technology or improvising traditional technology based on the principles of frugal innovation.

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