

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2140
ANSWERED ON 21/12/2023

DEVELOPING TEMPERAMENT FOR RESEARCH

2140# Shri Aditya Prasad:

Will the Minister of **Science and Technology** be pleased to state:

- (a) Whether it is a fact that Government is working on schemes with the Education Department and other concerned departments to develop temper for research from primary and secondary classes itself;
- (b) if so, the details thereof, if not, the reason therefor;
- (c) whether there are any plans of Government to encourage Indian scientific research institutions to undertake joint research and studies with foreign research institutions; and
- (d) if so, the details thereof, if not, the reasons therefor?

A N S W E R

MINISTER OF STATE (INDEPENDENT CHARGE) FOR THE
MINISTRY OF SCIENCE AND TECHNOLOGY
(DR. JITENDRA SINGH)

(a) to (b): Yes Sir. Government of India is working on various schemes and programs to develop temper for research among primary and secondary classes.

Department of Science & Technology (DST) is implementing INSPIRE -MANAK (Million Minds Augmenting National Aspiration and Knowledge), a unique scheme to inculcate creative thinking among school students and foster a culture of innovation and temper for research. More than five lakh ideas are received from students, studying in classes VI to X across the country to address challenges faced in everyday life. These selected students participate in a three-tier competition i.e. District, State, and National level exhibitions. Top 60 innovations are selected from the National Level Exhibition for incubation support and protection of Intellectual Property Rights (IPR).

DST through National Children Science Congress (NCSC) is also providing platform to students in the age group of 10-17 years to take up Science and Technology (S&T) projects in almost all the districts of the country.

Initiative for Research and Innovation in STEM (IRIS) is a research-based science initiative supported in PPP mode by DST to popularize science and innovation among students of Class 5 to 12. The program has reached out to over 4.5 million students since 2014. Winners of the IRIS National Fair participate as Team India in the world's largest international pre-college STEM Competition-Regeneron International Science and Engineering Fair (ISEF) every year.

The Council of Scientific and Industrial Research (CSIR) has been implementing a programme named "JIGYASA" since 2017. This is a student-scientist connect programme and CSIR has signed MoUs with Kendriya Vidyalaya Sangathan (KVS) & Navodya Vidyalaya Samiti (NVS), under Ministry of Education, Atal Innovation Mission of NITI Aayog, National

Council of Science Museum (NCSM), Karnataka Science and Technology Academy (KSTA), Royal Society of Chemistry to extend research laboratory based learning for school students through lab visits, onsite experiments. Till date nearly 1000 Jigyasa programmes have been organized benefiting more than 5,50,000 students. Jigyasa-Virtual Lab and Jigyasa mobile app platforms have been developed, in partnership with IIT-Bombay to cater to the scientific needs of school children, enhance scientific curiosity and attracting students towards science.

Ministry of Education through its National Education Policy (NEP) 2020 envisions to transform the quality of research in India defining shifts in school education to a more play and discovery-based learning with emphasis on the scientific method and critical thinking.

(c) to (d): Science and Engineering Research Board (SERB) and autonomous body of DST provides Overseas Visiting Doctoral Fellowship (OVDF) and SERB International Research Experience (SIRE) Fellowship to provides opportunity to Indian research students and scientists to gain exposure and access to top class research facilities in academia and labs in specific Overseas Universities. SERB has also signed an agreement/MoU with overseas Institutions (Purdue University, USA and University of Alberta, Canada).

Department of Biotechnology (DBT) supports visits/exposure programs for pre final year Indian students to have research exposure in US research institutions. Khorana Program for Scholars provide opportunities to Indian students to get research exposure at leading U.S. universities for a period of 10-12 weeks. DBT also supports collaborative projects in the areas of Biotechnology/Life Sciences through Bilateral cooperation/Multilateral cooperation with various countries/groupings including Australia, Germany, the Netherlands, Sweden, Switzerland, United Kingdom, United States of America, BRICS and European Union etc.

CSIR undertakes joint research and studies with foreign research institutions by developing cooperation linkages with leading international agencies across the globe. The collaboration is executed through scientific networking and collaborative research projects for human and institutional research capacity enhancement. Some of the global partners of CSIR include National Academy of Sciences of Belarus, Belarus, Institut Pasteur, France; Medicines for Malaria Venture, Switzerland; Bill & Melinda Gates Foundation, USA; National Institute of Environmental Health Sciences (NIEHS), USA; Fraunhofer-Gesellschaft (FhG), Germany etc.
