

GOVERNMENT OF INDIA
MINISTRY OF CULTURE

RAJYA SABHA
UNSTARRED QUESTION NO. 1620
ANSWERED ON – 13/03/2025

SCIENCE CENTRES AND INNOVATION HUBS

1620. SHRI KUNWAR RATANJEET PRATAP NARAYAN SINGH:

Will the Minister of CULTURE be pleased to state:-

- (a) the details of the science centres and innovation hubs established under the Scheme for Promotion of Culture of Science (SPoCS) initiative and the targets for the next 5 years, State-wise;
- (b) the details of programmes or events organized under SPoCS to promote scientific learning and experimentation for students since January 2020;
- (c) the details of collaborations with international organizations and industry leaders to achieve the scheme's objectives; and
- (d) the initiatives taken to raise public awareness about SPoCS and its programmes to increase participation and outreach?

ANSWER

THE MINISTER OF CULTURE & TOURISM
(SHRI GAJENDRA SINGH SHEKHAWAT)

- (a): National Council of Science Museums (NCSM), an autonomous organization under Ministry of Culture, Govt. of India is the implementing agency of the Scheme for Promotion of Culture of Science (SPoCS) of Govt. of India, under which Science Cities, Science Centres, Digital Planetarium, Innovation Hubs are set up across the country based on the proposals received from different State Govts./UTs desirous to set up Science Cities, Science Centre, Digital Planetarium, Innovation Hub etc.

The details of the Science Centres and Innovation Hubs that have been established under the Scheme for Promotion of Culture of Science (SPoCS) initiative and the targets for the same over the next five years, State-wise is attached at Annexure-I.

- (b): Out of the 27 Science Centres developed under SPoCS, only Palampur Science Centre is under administrative control of NCSM, Kolkata. Other Science Centres are handed over to respective State Govts after inauguration and are now under administrative control of State Govts.

The details of the programs or events organized under SPoCS to promote scientific learning and experimentation for school and college students at Palampur Science Centre and Innovation Hubs setup under SPoCS, which are under NCSM, Kolkata is attached at Annexure-II & Annexure-III respectively.

- (c): The details of collaborations with international organizations to achieve the scheme' objectives is attached at Annexure-IV.

- (d): The complete guidelines of SPoCS have been provided in the websites of Ministry of Culture, Govt. of India and NCSM, Kolkata. The details of activities undertaken under SPoCS have been highlighted every-year in the Annual Report publication of NCSM and all the achievements under SPoCS have been updated on the website of NCSM to raise public awareness about SPoCS and its programmes to increase participation and outreach.

**ANNEXURE REFERRED TO IN REPLY TO PART (A) OF LOK SABHA UNSTARRED
QUESTION NO. 1620 FOR 13.03.2025**

The details of the Science Centres that have been established under Scheme for Promotion of Culture of Science (SPoCS) initiatives (State-wise)

Sl. No.	Located in State/UT	Science Centers/Museums	Year of Establishment
1.	A & N Island	Science Centre, Port Blair	May 30, 2003
2.	Mizoram	Mizoram Science Centre, Aizwal	July 26, 2003
3.	Nagaland	Nagaland Science Centre, Dimapur	September 14, 2004
4.	Manipur	Manipur Science Centre, Manipur	May 18, 2005
5.	Arunachal Pradesh	Arunachal Pradesh Science Centre, Itanagar	Dec 3, 2005
6.	Meghalaya	Shillong Science Centre, Shillong, Meghalaya	February 27, 2006
7.	Sikkim	Sikkim Science Centre, Gangtok	February 22, 2008
8.	West Bengal	Sub-Regional Science Centres, Kalimpong	October 2, 2008
9.	Maharashtra	Sub-Regional Science Centre, Solapur	February 14, 2010
10.		Pimpri Chinchwad Science Centre, Pune	February 8, 2013
11.	Jharkhand	Regional Science Centre, Ranchi	November 29, 2010
12.	Chhattisgarh	Chhattisgarh Science Centre, Raipur	July 13, 2012
13.	Rajasthan	Regional Science Centre, Jaipur	December 29, 2012
14.		Sub Regional Science Centre, Jodhpur	August 17, 2013
15.	Assam	Jorhat Science Centre & Planetarium	July 6, 2013
16.	Tamilnadu	Regional Science Centre, Coimbatore	May 6, 2013
17.	Karnataka	Dharwad Regional Science Centre	February 27, 2012
18.		Regional Science Centre, Pilikula,	October 01, 2014

		Mangalore	
19.	Puducherry	Dr. Abdul Kalam Science Centre & Planetarium, Puducherry	May 03, 2015
20.	Odisha	Bargarh Science Centre, Bargarh	January 21, 2020
21.	Tripura	Udaipur Science Centre, Tripura	February 28, 2021
22.	Kerala	Kottayam Science Centre, Kerala	May 11, 2022 (Handed over)
23.	Bihar	Bodhgaya Science Centre, Bodhgaya	July 20, 2023
24.	Uttarakhand	Regional Science Centre, Dehradun	Feb 03, 2016
25.		Manaskhand Science Centre, Almora	March 10, 2024
26.	Himachal Pradesh	Palampur Science Centre, Palampur	May 14, 2022
27.	Andhra Pradesh	Rajamahendravaram Science Centre, Rajamahendravaram	Completed and ready for inauguration

The details of the Innovation Hubs that have been established under Scheme for Promotion of Culture of Science (SPoCS) initiatives (State-wise)

Sl. No.	Located in State/UT	Innovation Hub (Location/Name of the Centre)	Year of Establishment (Date of Inauguration)
1.	Delhi	National Science Centre, Delhi	23 rd January, 2014
2.	Assam	Regional Science Centre, Guwahati	4 th February, 2014
3.		Jorhat Science Centre & Planetarium, Jorhat	Inaugurated on 15 th August, 2022.
4.	Maharashtra	Nehru Science Centre, Mumbai	24 th February, 2014
5.		Raman Science Centre & Planetarium, Nagpur	14 th February, 2017
6.		BVB's Muktangan Exploratory Science Centre, Pune	28 th February, 2018
7.		Solapur Science Centre, Solapur	18 th February, 2022
8.	West Bengal	Birla Industrial & Technological Museum, Kolkata	23 rd August, 2013
9.		Bardhaman Science Centre, Bardhaman	10 th July, 2015
10.		Kalimpong Science Centre, Kalimpong	25 th February, 2017
11.		North Bengal Science Centre, Siliguri	16 th February, 2018

Sl. No.	Located in State/UT	Innovation Hub (Location/Name of the Centre)	Year of Establishment (Date of Inauguration)
12.		Digha Science Centre & National Science Camp, Digha	26 th February, 2019
13.		District Science Centre, Purulia	17 th December, 2019
14.	Kerala	Regional Science Centre & Planetarium, Calicut	1 st October, 2015
15.		Kerala State Science & Technology Museum, Trivandrum	17 th February, 2016
16.	Uttar Pradesh	Regional Science City, Lucknow	4 th January, 2016
17.	Uttarakhand	Regional Science Centre, Dehradun	3 rd February, 2016
18.		Manaskhand Science Centre at Almora	10 th March, 2024
19.	Andhra Pradesh	Agastya International Foundation, Kuppam	23 rd February, 2016
20.		Regional Science Centre, Tirupati	21 st May, 2017
21.		Science Centre at Rajahmundry	Completed and ready for inauguration
22.	Tamilnadu	Tamilnadu Science & Technology Centre, Chennai	5 th August, 2016
23.		District Science Centre, Tirunelveli	6 th September, 2017
24.		Regional Science Centre, Coimbatore	28 th October, 2021
25.		Anna Science Centre, Trichi	28 th October, 2021
26.	Bihar	Shrikrishna Science Centre, Patna	6 th November, 2016
27.		Sub-Regional Science Centre, Bodhgaya	20 th July, 2023.
28.	Rajasthan	Birla Science Centre, Pilani	11 th April, 2017
29.		Sub-Regional Science Centre, Udaipur, Rajasthan	Completed and ready for inauguration
30.		Regional Science Centre, Jaipur	23 rd September, 2024
31.		Sub-Regional Science Centre, Jodhpur	Completed and ready for inauguration
32.	Karnataka	Visvesvaraya Industrial & Technological Museum, Bangalore	5 th December, 2013
33.		District Science Centre, Gulbarga	29 th June, 2017
34.		Pilikula Regional Science Centre, Mangaluru	7 th March, 2024
35.	Madhya Pradesh	Regional Science Centre, Bhopal	1 st September, 2017
36.	Punjab	Pushpa Gujral Science City, Kapurthala	30 th November, 2017
37.	Gujarat	Vikram A Sarabhai Community Science Centre, Ahmedabad	27 th March, 2018
38.		District Science Centre, Dharampur	26 th October, 2018
39.	Meghalaya	Shillong Science Centre, Shillong	14 th June, 2019
40.	Nagaland	Nagaland Science Centre, Dimapur	28 th September, 2018
41.	Odisha	Regional Science Centre, Bhubaneswar	11 th July, 2018
42.	Sikkim	Sikkim Science Centre, Gangtok	20 th November, 2020
43.	Tripura	Sukanta Academy, Agartala	9 th October, 2021

Sl. No.	Located in State/UT	Innovation Hub (Location/Name of the Centre)	Year of Establishment (Date of Inauguration)
44.	Mizoram	Mizoram Science Centre, Aizawl	11 th September, 2018
45.	Arunachal Pradesh	Arunachal Pradesh Science Centre, Itanagar	8 th December, 2018
46.	Manipur	Manipur Science Centre, Imphal	16 th March, 2020
47.	Goa	Goa Science Centre, Panaji	1 st July, 2019
48.	Himachal Pradesh	Palampur Science Centre, Palampur	14 th May, 2022
49.	Puducherry	Dr. Abdul Kalam Science Centre & Planetarium, Puducherry	18 th May, 2022
50.	A & N Islands	Science Centre, Sri Vijaya Puram (Port Blair)	24 th October, 2024
51.	Telangana	Regional Science Centre, Warangal	Completed and ready for inauguration
52.	Jharkhand	Regional Science Centre, Ranchi	18 th February, 2025

Target for the Science Centres to be established under SPoCS scheme over the next five years (State-wise)

State	Project
Arunachal Pradesh	1. Science Centre (Category-II), Namsai, Arunachal Pradesh
	2. Science Centre (Category-II), Dirang, Arunachal Pradesh
Assam	1. Guwahati Science City, Assam
	2. Kokrajhar Science Centre (Sub-Regional), Assam
Chandigarh	1. Science Centre (Category-II), Chandigarh
Haryana	1. Ambala Science Centre (Category-II), Haryana
Jammu & Kashmir	1. Srinagar Science Centre (Category-II), Jammu & Kashmir
Karnataka	1. Shivamogga Science Centre (Category-II), Karnataka
	2. Science Centre (Category-III), Yadgiri, Karnataka
	3. Science Centre (Category-II), Raichur, Karnataka

	4. Science Centre (Category-III), Chikkamagaluru, Karnataka
Madhya Pradesh	1. Ujjain Science Centre (Category-II), Madhya Pradesh
	2. Jabalpur Science Centre (Category-II), Madhya Pradesh
Puducherry	1. Science Centre (Category-III), Thirunallar, Puducherry
Rajasthan	1. Ajmer Science Centre (Category-II), Rajasthan
	2. Kota Science Centre (Category-II), Rajasthan
	3. Udaipur Science Centre (Category-II), Rajasthan
	4. Bikaner Science Centre (Category-II), Rajasthan
Telangana	1. Science Experience Centre (Category-I), Hyderabad, Telangana
Tripura	1. Science City, Agartala, Tripura
Uttarakhand	1. Dehradun Science City, Uttarakhand

Target for the Innovation Hubs to be established under SPoCS scheme over the next five years (State-wise)

Sl. No.	State/Union Territory	Name of the Science City/Centre/Museum where Innovation Hub is located
1.	Kerala	Regional Science Centre, Chalakkudy
2.	Karnataka	Dharwad Regional Science Centre, Dharwad
3.	Jharkhand	Ranchi Science Centre, Ranchi
4.	J & K	Srinagar Science Centre, Srinagar
5.	Madhya Pradesh	Jabalpur Science Centre, Jabalpur

**ANNEXURE REFERRED TO IN REPLY TO PART (B) OF LOK SABHA UNSTARRED
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Palampur Science Centre, Palampur

(Inaugurated on 14th May, 2022)

Activities to promote scientific learning & experimentation for students

Year 2022-2023

- Palampur Science Centre, Palampur observed NPCIL-DAE iconic week programme from August 22 to 28, 2022, and organized poster making contest, quiz programme and popular lectures.
- Palampur Science Centre, Palampur organised 36 Sky Observation Programmes in which the participants learnt the fabrication of telescope and observed partial solar eclipse at the centre.
- Palampur Science Centre, Palampur conducted a workshop on ‘Innovation & Intellectual Property Rights’ for School/College Students on May 19; An orientation workshop on ‘Robotics and Model Making’ in collaboration with JNV, Kangra for girl students of JNV Kangra and KV Alhilal under the Vigyan Jyoti Programme from November 21 to 24; Science Orientation Workshop and Farmer Sensitisation Programme on ‘Environment Friendly Agricultural Practices and Food Safety’ during Youth Festival organised at MahaTejasYuva Mandal, Band Vihar, Dyogra, Palampur from January 10 to 17.
- Palampur Science Centre, Palampur arranged a popular talk on ‘Health, Hygiene & Sanitation Practices’ and a guided tour of the galleries and other facilities for the students with disabilities from Surya Uday Charitable Trust, Dharamshala, on May 20. Approximately 60 students and their escorts benefited from the program. Furthermore, a popular talk on environment protection, along with a guided tour of the galleries and other facilities was organized for the students with disabilities from Rotary Sewa Ashram, Saliana (The Palampur Rotary HelpAge Foundation), on February 23. Around 47 students were beneficiaries of this program.

Year 2023-2024

- In order to create awareness about the proper use of resources and conservation of earth, Palampur Science centre observed Earth Day on April 22, 2023 by organising various educational programmes like Popular science lecture, Open House Quiz, Painting Competition and screening of films for school students.
- On the occasion of National Energy Conservation Day (December 14, 2023), various educational programmes were organized for the students and general public at Palampur Science Centre, Palampur.
- Palampur Science Centre has celebrated the 10th anniversary of the launch of Mars Orbiter Mission by organising a Sky Observation Programme at 5:45 PM on 5th

November, 2023 in the centre premises. In this programme, Moon, Saturn and Jupiter were shown in sky by the telescope.

- On 7th November 2023; birth anniversary of Sir C V Raman was observed at Palampur Science Centre. On this occasion, educational programmes were organised for the students and general public.
- India's first solar observatory probe 'Aditya L-1' was launched on the September 02, 2023. Palampur Science Centre, Palampur organized the live telecasting of the astonishing and memorable sight.
- The Palampur Science Centre, Palampur, celebrated 'International Science Culture Day' with great enthusiasm on September 28, 2023. On this occasion, the centre organized various educational programs for students and the general public.

Year 2024-2025

- A Unit Level IDEATHON on Science Gallery was organised in the premises of Palampur Science Centre, Palampur on 22nd April, 2024.
- On the occasion of the second anniversary of Palampur Science Centre, Palampur i.e. on 14th May 2024, 3D Science Film Theatre facility was inaugurated at the centre by Hon'ble Chief Guest Shri Sudesh Kumar Yadav, Director, Council of Scientific & Industrial Research - Institute of Himalayan Bioresource Technology, Palampur.
- National Energy Conservation Day was observed at Palampur Science Centre on 14th December 2024 by organising educational programmes for the students and general public.
- In order to commemorate the Birth Anniversary of Indian mathematician "Srinivasa Ramanujan"; National Mathematics Day was observed at Palampur Science Centre, Palampur on 22nd December, 2024 by organising educational programmes for the students and general visitors.
- The Birth Anniversary of Sir C. V. Raman was observed at Palampur Science Centre on 7th November 2024 by organising educational programmes for the students and general public.
- Hiroshima Day was observed on 06 August, 2024 by offering condolences to the victims of the devastating attack happened on 6 August, 1945 at Hiroshima, Japan. Various educational programmes were organised to create awareness, about the nuclear-weapon free world and the peaceful applications of nuclear technology for the benefit of society.
- "International Moon Day" was observed at Palampur Science Centre, Palampur on 20th July, 2024 by organising various activities for the students and general public.
- 'International Museum Day' was observed at Palampur Science Centre, Palampur on 18th May, 2024 by organising various activities for the students and general public. The Documentary Film on the theme 'Museums for Education and Research' was screened in the auditorium of the Palampur Science Centre in which the importance of the Museums and Science Centres for the present scenario were shown.
- In a series of public awareness programmes on Climate Change and Carbon Neutrality and training workshop organised for public representatives in Panchayati Raj Institutions in the state of Himachal Pradesh; Palampur Science Centre organised science orientation workshops and training programmes on 28th June, 9th July & 25th July, 2024 addressing issues pertaining to Climate Change, Carbon Neutrality and imperative actions to be taken at local level in light of sustainable development goals.

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Important Activities/Programmes/Events Organized by Innovation Hubs under NCSM

Important Activities/Programmes/Events Organized by Innovation Hubs During 2020 –21:

- Four days Conference on Empowering Rural Marginalized youth - The Gandhian Way (Self-reliance through IT hardware and software integration) was organised at Regional Science Centre & Planetarium, Calicut during 18th - 21st November, 2019. The sessions included e-commerce and e-governance.
- Two Workshops on 2D Animation were organized at Regional Science Centre, Bhopal during November, 2019.
- Shri Archit Aryaman of class IX, a member of Innovation Hub of Regional Science Centre, Guwahati received the prestigious Dr. APJ Abdul Kalam IGNITE Award 2019.
- Rainbow Fire Workshop was organized at Goa Science Centre, Panaji on 1st December, 2019. The workshop includes presentation on Basics of Atoms, Photon emission etc. Total 10 members attended the workshop.
- Workshop on ‘Intellectual Property Right (IPR)’ was organized at Science Centre, Bardhaman on 22nd December, 2019. More than 180 students from different schools were participated.
- Workshop on ‘Hydroponics’ was organized at Digha Science Centre, Digha in collaboration with Dept. of Science & Technology, Delhi from 14th to 16th January 2020. 51 Innovation Hub members participated.
- North East Zonal Robot Olympiad was organized at Regional Science Centre, Guwahati on 20th & 21st January, 2020.
- Exhibition on ‘Innovative Products & Designs’ by young students was organized at Regional Science Centre, Bhopal on 24th January, 2020.
- Workshop on ‘Foldscope – a Paper Microscope’ was organized at Birla Industrial & Technological Museum, Kolkata on 25th January 2020. 50 members of Innovation Hub and Biotech Lab of BITM, Kolkata participated.
- Workshop on ‘Entrepreneurship Development through Innovation’ was organized at Digha Science Centre, Digha on 27th & 28th January, 2020. 47 college students participated.
- Workshop on ‘Mathematics’ was organized at Birla Industrial & Technological Museum, Kolkata on 30th January, 2020. 25 students participated.
- One member of the Innovation Hub of Regional Science Centre, Guwahati developed a project ‘Solution to Artificial Flood’ and participated with the project in Regional level of 27th KVS National Children’s Science Congress 2019 held at Guwahati; National Children’s Science Congress held at Thiruvananthapuram and Indian Science Congress held at Bengaluru.

- Workshop on ‘Innovation in Art & Craft’ was organised at Regional Science Centre & Planetarium, Calicut on 25th & 26th January 2020. 25 students participated.
- A hands-on practical Workshop on ‘Basics of Biotechnology’ was organised at Regional Science Centre, Bhopal on 23rd February, 2020.
- Innovation Hub of Regional Science Centre & Planetarium, Calicut helped 7 schools in the local region to set up Innovation Clubs in their premises and collaborated with 3 Atal Tinkering Labs in the region during this period.
- Innovation Hub of Shrikrishna Science Centre, Patna collaborated with 2 Atal Tinkering Labs during this period.
- Popular Science Talk on ‘Innovations in Nuclear Technology in India’ delivered by Dr. Arun Kumar Bhaduri, Director, Indira Gandhi Centre for Atomic Research, Kalpakam was organised at Regional Science Centre, Tirupati on 1st March, 2020 during the Valediction of Innovation Festival.
- Innovation Festivals were organized at North Bengal Science Centre, Siliguri (20th to 22nd January 2020), District Science Centre, Gulbarga (21st to 23rd January 2020), District Science Centre, Tirunelveli (23rd to 25th January 2020), Regional Science City, Lucknow (29th to 31st January, 2020), Birla Industrial & Technological Museum, Kolkata (1st February, 2020), Visvesvaraya Industrial & Technological Museum, Bangalore (27th to 29th February 2020), Raman Science Centre, Nagpur (13th – 15th February, 2020), Regional Science Centre, Tirupati (28th February to 1st March 2020), District Science Centre, Dharampur (26th to 27th February, 2020), Nehru Science Centre, Mumbai (5th – 7th March, 2020).
- Online classes on ‘COVID Katha - a multimedia guide for mass awareness’, ‘Making proper connections of a low cost drone’, ‘Device / software related project work’, ‘Technology development for facemask to improve the protection from any virus’, ‘IOT related project work’, ‘Software related project work’, ‘Sensor related project work’, ‘Programming related project work’, ‘Digital electronics related project work’, ‘Different types of sensors’, ‘Basic circuit making using tinker cad’, ‘Calculation, simulation & characterization of basic electronics components’ etc. were conducted by the Innovation Hub of Birla Industrial & Technological Museum, Kolkata during May, 2020. Online ‘Learn at home’ activities on ‘How hot water rises to the top’, ‘Candle under the tumbler experiment’, ‘Magic rollback can’, ‘Make your own rainbow’, ‘Make a smoke obey’ were also organised by the Innovation Hub of the Museum during May, 2020.
- Two online orientation sessions on ‘Exploring nature’ & ‘Fisheries’ were organised by the Innovation Hub of Regional Science Centre, Bhopal for its members during May, 2020.
- Two online orientation sessions on ‘Basics of electronics’ and ‘Introduction to Arduino’ for the Innovation Hub members of Regional Science Centre, Bhopal on 28th June, 2020.
- Online sessions on ‘Robotics NXT programming’ on 1st June, 2020 (22 innovation hub members participated); on ‘Computer aided designing: sketch up for product development’ on 8th June, 2020 (Participants-29 students); on ‘3D printing: coding for product prototyping’ on 15th June, 2020 (Participants -34 Students); on ‘Basics of electronics & led bulb making’ on 26th June, 2020 (Participants -31 students) and on ‘Automation of devices (LED bulb)’ on 30th June, 2020 (Participants - 40 students) were organized for Innovation Hub members of Regional Science City, Lucknow through Google Meet.
- Three members of Innovation Hub of Bardhaman Science Centre, Bardhaman were awarded the INSPIRE MANAK Award of Dept. of Science & Technology, Govt. of India in December, 2020 with a cash prize of Rs.10,000/- each for their innovation projects in the hub.

- Online Workshop on 'Introduction to Basic Electronics' was organized by Science Centre, Bardhaman on 19th November, 2020 for students from different schools including members of Innovation Hub.
- Online Session on 'Chromatographic Techniques-Separating the Components of Compound' was organised by the Innovation Hub of National Science Centre, Delhi on 25th November, 2020.
- Popular Science Lecture on 'Nanotechnology: Recent Advancement', delivered by Dr. T N V K V Prasad, Phd. ERF (Aus), Principal Scientist (Soil Science) Principal Investigator, ICAR, NASF Nanotechnology Laboratory Institute of Frontier Technology, Regional Agricultural Research Station, Acharya N G Ranga Agricultural University, Tirupati, was organised at the Innovation Hub of Regional Science Centre, Tirupati on 13th February, 2021 (Participants: 44 students and general visitors).
- Online Science Cartoon Contest on 'Science around Us' (Participants: 66); Family Innovative Challenge (Participants: 6 families); Development of Projects like '4D tesseract cube' & 'Airbazooka' were organised by Innovation Hubs of National Science Centre, Delhi on 28th February, 2021.
- 08 online Orientation Sessions on various themes viz. 'Flex Sensor', 'Force Sensor', 'Neopixel Sensor', 'Centrifugal Pump Designing' etc. were organized by Regional Science Centre Bhopal in February, 2021 (Total participants: 33 members).
- Online Sessions on various themes viz. 'Hands on Robotics' on 2nd February, 2021 (Participants: 33 students); on 'Basics of Electronics with Thinker CAD' on 9th February, 2021 (Participants: 28); Workshop on 'CAD & 3D Modeling' on 15th February, 2021 (Participants: 28); on 'Robotics and Coding' on 21st February, 2021 (Participants: 35) were organized by Innovation Hub of Regional Science City, Lucknow.
- 09 Orientation sessions on various themes viz. 'Design of Applications Based on Force Sensor', 'Tone Generator Using Force Sensor', 'Tone Generator Using Flex Sensor', 'Introduction and Application of 4x4 Keyboard Matrix', 'Introduction to Parallel Plate Capacitor using PHET Simulation' etc. were organized at the Innovation Hub of Regional Science Centre, Bhopal during March, 2021 (Participants: 38 students).

Important Activities/Programmes/Events Organized by Innovation Hubs During 2021–22:

- Online Workshop on 'Era of Applications' was organized by Innovation Hub of Digha Science Centre on 28th & 29th April, 2021 (Participants: 21 students of standard VI to X).
- Online Workshop on 'Era of Applications' based on Python programming language was organized by the Innovation Hub of Digha Science Centre, Digha on 24th & 25th May, 2021. (Participants: 10 students).
- 02 Orientation Sessions on topics 'Solving Mathematics using Digital Tool: Geogebra' & 'Lego Robotics' for the Innovation Hub members of the Regional Science Centre, Bhopal were organized by the Centre (Participants: 08 members of the hub).
- Online Session on 'Robotics' on 3rd May, 2021 (Participants: 12 members); online Session on '3D Modelling' on 7th May, 2021 (Participants: 15 members); online Lecture on '3D Printing and CURA Slicing' on 17th May, 2021 (Participants: 11 members); online Session on 'Robots and Human' on 28th May 2021 (Participants: 48 members) were organized by the Innovation Hub of Regional Science City, Lucknow.
- Online sessions on the topics, Industrial CAD (Computer Aided Design), Introduction to Solid Works and Sketch-Up Professional and Introduction to Arduino and IDE, Microcontroller and Sensor were organised by Regional Science City Lucknow on 6th August 2021, 28th August 2021, 20th - 21th August 2021 and 28th August 2021 respectively for Innovation Hub members.

- Goa Science Centre and planetarium, Panaji organized a total of 9 orientation sessions on topics: Introduction to L293D Motor driver and H Bridge motor driver circuit, How to connect Digital Encoder with Arduino, How to build a tone generator using Arduino and 4X4 keyboard, How to detect a water level using an ultrasonic sensor, Designing of Boolean gates using Arduino and verification of its Truth table etc. during September, 2021.
- Regional Science City, Lucknow organized various sessions on ‘Arduino IDE and Sensors’ (September 4), ‘TinkerCad and Electronics’ (September 11), ‘Introduction to Automation’ (September 18), ‘Robotics and Automation’ on 25th -26th September, 2021.
- Introduction to Python: An interactive session on the topic “Coding: Introduction to Python” was conducted by Innovation Hub, RSC Lucknow on 3rd October 2021 for the students and hub members.
- A session on the topic ‘Introduction and Installation - PyCharm IDE’ was organized on 9th October 2021 for the Innovation Hub members (Engineering Student) of RSC Lucknow during this session members were introduced to PyCharm, Integrated Development Environment (IDE) and they installed PyCharm IDE software and written some basic codes using Python programming.
- A hands on session on the topic Robotics and Automation was conducted on 16th October 2021 for the students and Hub (RSCL) members. During these sessions the participants were introduced to Industrial Robotics and Automation.
- A session on Web Development with Python Using Django was organized for the Innovation Hub members of RSC Lucknow on 23rd October 2021. In this session participants were briefed about the basics of web development in Python Programming through Django Interface.
- In continuation of earlier session, an additional session on Web Development with Python Using Django was conducted for the Innovation Hub members of RSC Lucknow on 30th October 2021. During this session participants learned to launch a dummy website using Django Interface in Python.
- National Science Centre, Delhi organised Tool Operation Workshop for Innovation Hub Member on 23rd & 24th October 2021. During this workshop members learnt the importance of measurement, introduction of electronics tools and introduction of Biotechnological tools.
- The Innovation Hub of Regional Science Centre, Bhopal organized a total of 12 orientation sessions throughout October, 2021. These sessions were on topics: Introduction to programming language Python and its installation, Installation of PyCharm: Python IDE, different programming related to Python viz: Syntax, Variable, Comments, Data type, Number Strings, List, Tuple, Sets, If-else condition etc. All these orientation sessions were organized in online mode and a total of 72 students took part in the same.
- Online Workshops on ‘Virtual Robotics’ (Participants: 78 school students of Class VI to XII) and ‘Electronic Circuit Design’ (Participants: 54 students of various institutions); were organized by Innovation Hub of Birla Industrial & Technological Museum, Kolkata on 13th & 27th November, 2021 respectively.
- Quiz Sessions on ‘Physical Sciences’ through offline & online mode; online Lecture on ‘Electronic Transmitter and Receiver Systems’, online Popular Talk on ‘Raise awareness about the issues caused by pollution’ were organised by the Innovation Hub of Birla Industrial & Technological Museum, Kolkata during November, 2021 for Innovation Hub members.
- Workshop on ‘Innovation: A key to Entrepreneurship’ was organised by the Innovation Space of Delhi on 13th November, 2021 (Participants: 6 Students).

- Innovation Hub of Regional Science Centre, Bhopal organized 9 online orientation sessions on the topic Python Programming, Dengue and Node MCU and its application using Gas sensor as well as 2 Online afterschool workshops on IoT for Environment Parameters using gas sensor and IoT based RFID card attendance system during November, 2021.
- Web Exhibition by Young Students on ‘Innovative Products and Design’ was organised by the Innovation Hub of Regional Science Centre, Bhopal on 21st & 22nd December, 2021.
- To carry out hands on activities on STEM education and to develop Innovative skills, an Innovation Incubation Camp was organised by the Innovation Hub of Regional Science Centre, Tirupati on 19th & 26th December, 2021 (Participants: 25 Members)
- A total of 9 online orientation sessions on the topics Python Conditional & Iterative Statements Python Programming to Solve Quadratic Equations for Complex Roots, Python GUI Turtle, Green House Effect etc. were organized by the Innovation Hub of Regional Science Centre, Bhopal during December 2021 (Participants: 54 students). Besides these orientation sessions, 3 Online Workshops after School Hours viz: Design a Virtual Piano Application for Android, Design an Android App to collect data in Google Sheet, IoT Based Home Automation system were also organised (Participants: 6).
- Innovation Incubation Camp was organised on 2nd & 9th January, 2022 for the Innovation Hub members of the Regional Science Centre, Tirupati and conducted hands on activities on STEM education and develop innovative skills for newly joined members.
- Nehru Science Centre, Mumbai started a new batch of Innovation Hub on 8th January, 2022 onwards. The session was organised online for 30 registered participants. A workshop was also organised to enhance thinking & hands-on skills in physics, chemistry and life science etc.
- Regional Science Centre, Bhopal organized a total of 10 orientation sessions on Python programming covering topics such as List Manipulation, String Manipulation, and Tuple Manipulation during January, 2022. All of these orientation sessions were organized in online mode and a total of 40 students took part in these sessions.
- District Science Centre, Tirunelveli organized an online workshop on ‘STEAM’ for the School Students on 22nd January, 2022. During the workshop, hands-on activities for the participants including developing STEAM models was organised. 43 Students participated.
- An online session on the topic ‘Fun with Maths’ was organised by Innovation Hub of Regional Science City Lucknow on 14th January, 2022 for the students.
- An online lecture/webinar on “Why do we age: Interventions for healthy aging” was organized jointly by Innovation hub of Regional Science City, Lucknow & National Academy of Sciences India (NASI) Lucknow Chapter on 18th January, 2022.
- Regional Science City, Lucknow-Innovation Hub organized an online workshop on ‘Scientific Toy Making’ for students on 19th January 2022. During the workshop, students were demonstrated to make useful models explaining basic of scientific principles.
- Innvo-Fest -2022, an Online Science & Innovation Festival, were organised by North Bengal Science Centre, Siliguri from 16th to 18th February, 2022.
- Online Scientific & Innovative Idea Competition was organised by North Bengal Science Centre, Siliguri on 16th February, 2022 (Participants: 25)
- An online STEM Workshop was organized by North Bengal Science Centre, Siliguri on 17th February, 2022.
- An online Popular Science Lecture was arranged on the topic ‘Innovation after Independence: India's March in Science and Technology’ delivered by Dr. ManasPratim Das, Programme Executive, All India Radio, Kolkata, was organized by North Bengal Science Centre, Siliguri on 18th February, 2022. An online Quiz Competition on the topic ‘Science & Innovation’ was also organized on the same day.

- Innovation Hub of Regional Science Centre, Bhopal organized 08 programmes on the topics Python Dictionary, Python Tuple Manipulation, Python Date Representation, Python Nested List and Cybersafety wherein a total of 58 students participated in February, 2022.
- Online Session on ‘Robotic and Lego Programming’ on 3rd February, 2022 (Participants: 120 students); Online workshop on ‘LED bulb making’ on 17th February 2022 (Participants: 30 students); Online Session on ‘Tools operation’ on 25th February, 2022 (Participants: 27 students); Webinar on ‘COVID-19: Learn to Live with Virus’ on 28th February 2022 (Participants: 60 students); were organized by the Innovation Hub at Regional Science City, Lucknow
- An online Innovative Idea Poster Contest on ‘Integrated Approach in Science and Technology for a Sustainable Future’ was organized by the Innovation Hub of Birla Industrial & Technological Museum, Kolkata on 14th March 2022 (Participants: 69 school and college students).
- 3D Printing Workshop was organized by the Innovation Hub of Digha Science Centre, Digha on 25th March, 2022.
- Innovation Festival was organized by the Innovation Hub of National Science Centre, Delhi on 25th & 26th March, 2022.
- Online Astronomy Workshop on the topic ‘Measurements and Calculations in Astronomy’ was organized by the Innovation Hub of National Science Centre, Delhi on 28th March 2022 (Participants: 80 students).
- Online Session on ‘Human Torso’ was organized by the Innovation Hub at Regional Science City, Lucknow on 9th March, 2022 (Participants: 87 school students of Class V to VII).
- Online Session on ‘Robotic and Lego’ Programming was organized by the Innovation Hub at Regional Science City, Lucknow on 15th March 2022 (Participants: 25 students).
- Workshop on ‘Scientific Toy Making’ for students by the Innovation Hub at Regional Science City, Lucknow on 31st March 2022 (Participants: 12 students).
- Four online Innovation Hub sessions were organized by the Innovation Hub of Nehru Science Centre, Mumbai on all Saturdays during this month, viz: 5th, 12th, 19th and 26th March 2022.
- Innovation Hub of Regional Science Centre, Bhopal organised a total 8 orientation sessions on various topics under the course titled 'Introduction to Python & installation of PyCharm: Python IDE' in March, 2022.

In addition to the above, the following online STEM-based Workshop on various themes exclusively for girl students/women were organized by the Innovation Hub of various NCSM Units during June, 2021:

- Workshop on ‘Basic Robotics’ by the Innovation Hub of Birla Industrial and Technological Museum, Kolkata on 29th June, 2021 (Participants: 90 women / girls).
- Workshop on ‘New Age of Robotics’ by the Innovation Hub of Bardhaman Science Centre on 28th June, 2021 (Participants: 42 girl students).
- Workshop on ‘Fun with Mathematics’ by the Innovation Hub of North Bengal Science Centre, Siliguri on 29th June, 2021 (Participants: 35 girl students).
- Workshop on ‘Artificial Intelligence’ by the Innovation Hub of Digha Science Centre, Digha on 29th June, 2021 (Participants: 50 girls/women).
- Workshop on ‘Kitchen Chemistry’ on 25th June, 2021 (Participants: 23 girl students) and on ‘Mobile App Development’ on 26th & 27th June, 2021 (Participants: 46 girl students); by the Innovation Hub of Nehru Science Centre, Mumbai.

- Workshopson ‘Virtual Robotics’, ‘A Taste of Astronomy’, ‘Introduction to 2D Animation’ and ‘App Development’ during 28th to 30th June, 2021 by the Innovation Hub of Regional Science Centre, Bhopal(Participants: 75 girlstudents).
- Workshop on ‘Mathematics in Nature’ on 28th June, 2021 (Participants: 101 girls) and on ‘3D Printing Technology’ on 29th June, 2021 (Participants: 56 of students) by the Innovation Hub of Goa Science Centre, Panaji.
- Online Kitchen Gardening Workshopby the Innovation Hub of Regional Science Centre, Tirupati on 27th June, 2021 (Participants: 40 women / girls).
- Workshops on ‘Science around us’ and ‘Sustainable Technology’ by the Innovation Hub of National Science Centre, Delhi on 30th June, 2021 (Participants: 120 girl students).
- Online Sessions on ‘CAD’ (3D Designing) on 11th June, 2021 (Participants: 13); on ‘Robotics and Automation’ on 18thJune, 2021, (Participants: 40 girls) and on ‘Fun with Code’ (App Development using GUI)on 24th& 25thJune, 2021, (Participants: 50 girls) by the Innovation Hub of Regional Science City, Lucknow.
- As a part of STEM education for girls & women, an online interactive Session on 'Fun with Mathematics'conducted by Prof. V. S. S. Sastry, Renowned Mathematics Communicator, Kolar, Karnataka, was organized by the Innovation Hub of Visvesvaraya Industrial and Technological Museum, Bangalore on 6th July 2021 (Participants: 248 girl students and Viewers: 193 people).
- Workshop on ‘Introduction to Astronomy’ was organized at Innovation Space of Regional Science Centre, Tirupati on 4th July 2021 exclusively for girl students(Participants: 30).
- Webinar on ‘Career opportunities in Astronomy & Astrophysic’, delivered by Dr. Niruj Mohan Ramanujam, Scientist, Radio Astronomer, Indian Institute of Astrophysics, Bengaluru was organized by District Science Centre, Gulbarga as a part of STEM education for girls & women on 5th July, 2021 (Participants: 95).
- Webinar on ‘Artificial Intelligence’, delivered by Dr K Gokulakrishnan, Assistant Professor, Dept. of Electronics & Communication Engineering, Anna University Regional Campus, Tirunelveli, was organised by Innovation Hub of District Science Centre, Tirunelveli specially for girls / women participants as a part of STEM Activities on 2nd July, 2021 (Participants: 42).
- Online STEM learning Workshop was organized by the Innovation Hub of Regional Science Centre & Planetarium, Calicut exclusively for girls from 1st to 6th July, 2021. As a part of the programme, Workshops on ‘Robotics’ and ‘Automation’; Webinars on ‘Science of Cooking’, ‘Chemistry of Cosmetics’ and Demonstration on ‘Collision’ were held during the period (Participants: 148 girls).
- Arduino Workshop was organized by Raman Science Centre Nagpur on 26th July, 20021 at Innovation Hub of Raman Science Centre, Nagpur for school students.
- A STEM workshop on ‘Satellite Communication’ conducted by Prof. Mohini Naik Gadekar, Regional Mentor of Change, NITI Aayog, was organized by Goa Science Centre on July 16, 2021.(Participants: 66 girl students)
- A STEM Workshop on ‘The Story of the discovery of BryumBharatiensis: new plant species found by India in Antarctica’ conducted by Prof. Felix Bast, Associate Professor, Central university of Punjab, was organized by Goa Science Centre, Panaji on 26th July, 2021 (Participants: 25 girl students).

Important Activities/Programmes/Events Organized by Innovation Hubs During 2022–23:

- Online Workshop on 'Fun with Maths' held at the Innovation Hub of Regional Science City, Lucknow on 19thApril, 2022 (Participants: 15 students).

- Online session on ‘Electronics: Do it Yourself’ was organised by Innovation Hub of Regional Science City, Lucknow on 28th April, 2022. About 13 students registered and took part in this online workshop.
- Innovation Hub of Regional Science Centre, Bhopal organized a total of 8 orientation sessions on various topics under the course titled 'Learning with Arduino using Tinkercad using LEDs, potentiometer and Pushbuttons etc. All these orientation sessions were organized in hybrid mode (online & onsite) and a total of 40 students took part in the same.
- Innovation Hub at Regional Science City, Lucknow organized two camps on “Robotic and Lego Programming” from 6th to 10th June, 2022 under vacation hobby camp.
- Innovation Hub at Regional Science City, Lucknow organized a vacation hobby camp on ‘Fun with Astronomy’ from 20th to 24th June 2022.
- Innovation Hub of Regional Science Centre, Bhopal organized a total of 5 orientation sessions on various topics titled ‘Learning with Arduino’, ‘Programming with Python and Android App Development’. A total of 30 students took part in these programme. Apart from this, a programme entitled 'A Day with Mentor' was also conducted in two sessions comprising topics on ‘Learning with Arduino’, ‘Programming with Python and Android App Development’ in which 20 students participated.
- Workshop on ‘Artificial Intelligence’ was organized at Innovation Hub of North Bengal Science Centre, Siliguri on 6th November, 2022.
- Sessions on the different topics like ‘Tesla Coil’, ‘Fantastic Chemistry’, ‘Investigating DNA’, ‘Racing Molecules’, ‘Robotics’ & ‘Making of Bridges’ were organised for school students in Innovation space lab of National Science Centre, Delhi. 200 students from different schools of Delhi participated.
- Innovation Hub of Regional Science Centre, Bhopal organized a total of 5 orientation sessions on topics such as 'Create an Android Application using Google Cloud', 'Separation of Chemicals by Paper Chromatography', 'Design a User Registration Form Using Python' and 'Design A Python Game Using Keyboard'. A total of 23 students participated in all these sessions.
- Three sessions on ‘Robotic and Advance Lego Programming’ were organized at Innovation Hub of Regional Science City, Lucknow on 15th, 18th & 21st November, 2022 (Participants: 48 students).
- Hands-on session on ‘Science Toy Making’ was organized at Innovation Hub of Regional Science City, Lucknow on 10th November, 2022. In all 35 students took part in this workshop.
- Hands-on session on ‘Basics of Arduino’ was organized by the Innovation Hub of Birla Industrial & Technological Museum, Kolkata during 17th to 18th December, 2022. 50 school students of classes 6 to 10 attended the programme.
- Hand-on Activities from toys to trash, Exposure to 3D printing technology, a session on ‘Know the Innovators’ and Lecture on ‘Compute, compute, compute – how hard can it get?’ were organized at the Innovation Hub of Nehru Science Centre, Mumbai in December, 2022.
- An Orientation Session on the topic ‘Emerging Technologies in the Drone Industry’ was organised for the Innovation Hub members of the Regional Science Centre, Bhopal on 4th December, 2022 (Participants: 9 students).
- Basic Electronics and Basic Microbiology workshop was organized for the members of Innovation Hub of Goa Science Centre, Panaji on 6th December, 2022.
- Workshop on 'Learning Python' was organised at Innovation Hub of National Science Centre, Delhi on 28th and 29th December, 2022 for students from various schools.

- A session on 'Maths and Computational Thinking' was organised at Innovation Hub of National Science Centre, Delhi on 16th December, 2022 for the school students in which 40 students and teachers participated.
- Innovation Session on 'Robotic and advance Lego Programming' was organized at the Innovation Hub of Regional Science City, Lucknow on 14th December, 2022. Around 18 students participated.
- Workshop on Arduino & IDE was organized at Innovation Hub of Regional Science City, Lucknow on 20th December, 2022.
- A workshop cum interactive session on 'Nature trail & Herbarium techniques' was organized by the Innovation Hub of Regional Science City, Lucknow on 22nd December, 2022 for the students. About 40 students took part from various local schools.

Important Activities/Programmes/Events Organized by Innovation Hubs During 2023–24:

- 03 Sessions titled 'Know the Innovators' were organised by the Innovation Hub of Nehru Science Centre, Mumbai from 14th to 31st October, 2023 (Participants: 16 members of Innovation Hub).
- Workshops on 'Robotics' (Participants: 5 students); and 'Drone' (Participants: 6 students); were organised by the Innovation Hub of Raman Science Centre & Planetarium, Nagpur in October, 2023.
- 10 Orientation Sessions on the topic Bottle Thermometer, Smartphone Projector, Robotics, Science behind Sunspots, Beyond Human Vision, The Science of Colors, 3D Vision, Moon Farm, Measuring the brightness of Lunar Eclipse by Danjon's Method, Adaptation in Plants & Animal etc. were organised by Regional Science Centre, Bhopal in October, 2023 (Participants: 54 members of the Hub). Besides, Session on 'Kabad se Jugad' and 'Meet the Scientist' were also organised by the Centre.
- Workshop on 'Kabaad Se Jugaad' was organised by the Innovation Hub of District Science Centre, Dharampur in collaboration with Bayer Vapi Pvt. Ltd. on 29th October, 2023 (Participants: 26 students).
- Student members of Innovation Hub of District Science Centre, Dharampur participated in National Level Technical Festival 'Vardhnam 2023' at S & S.S. Gandhi College of Engineering and Technology, Surat on 21st & 22nd October, 2023 in the event of Robotics. Two teams from the Innovation Hub were introduced there which won First and Third Position at the event among 10 teams.
- Integrated Science Activities were organized by the Innovation Hub of District Science Centre, Dharampur on every Saturday and Sunday in October, 2023 (Participants: 30 students).
- Exposure Visit of students and Workshop were organised by the Innovation Hub of Regional Science Centre and Planetarium, Calicut, on 23rd October, 2023.
- A Project titled 'A Mechanism for Regulating Overuse of Pesticides and Fertilizer' has been developed by Shri M Chethan, a member of the Innovation Space of Regional Science Centre, Tirupati, at the Innovation Space of the Centre. The Project was selected as one of the Top 60 projects of National Level Inspire Manak. The Innovation Hub member received prize from Dr. Jitendra Singh, Hon'ble Minister of Science and Technology, Govt. of India, for the project.
- 04 Hands-on Sessions on 'Make your own Speaker', 'Peep into the Cell - DNA isolation' and 'Electric Motor' were organised by National Science Centre, Delhi, in October, 2023 (Participants: 150 students from different schools of Delhi).

- AvishkarRoboKit Training Session was organised by National science Centre, Delhi for staff members on 18th October, 2023.
- Innovation Session on ‘Lungs Capacity Measurement’ on 18th October, 2023 (Participants: 28 school students); was organised by the Innovation Hub of Regional Science City, Lucknow.
- STEM Workshop on ‘Mathematics & Science’ was organised at the Innovation Hub of North Bengal Science Centre, Siliguri for the students of PM SHRI Kendriya Vidyalaya, Bengdubion 28th & 30th November, 2023 (Participants: 50 students).
- Session on Air Pressure Activities; Disaster Management; Biology Session; Tod FodJod; Meet the Scientist were organised by the Innovation Hub of Nehru Science Centre, Mumbai on 4th, 11th, 18th and 25th November, 2023.
- ‘Drone Workshop: Introduction to Drones & components, interactive experience of building your own drone’, was organised by the Innovation Hub of Raman Science Centre and Planetarium, Nagpur in collaboration with Arma Aerospace Pvt. Ltd, Kanpur UP (Nagpur Branch) on 5th & 26th November, 2023 (Participants: 6).
- Robotics Workshop was organised by the Innovation Hub of Raman Science Centre and Planetarium, Nagpur in collaboration with M/s Brand Brains Innovations Pvt. Ltd, Nagpur on 3rd & 4th November, 2023 (Participants: 5).
- Hands on Activities on ‘Vaccines Injecting Hope’ was organised by the Innovation Hub of Raman Science Centre and Planetarium, Nagpur in collaboration with Takhatmal School, Amraoti, on 27th November, 2023.
- Foldscope Making Workshop on ‘Vaccines Injecting Hope’ was organised by the Innovation Hub of Raman Science Centre and Planetarium, Nagpur in collaboration with Research Foundation of India, Wardha, on 28th November, 2023.
- 09 Orientation Sessions were organised by the Innovation Hub of Regional Science Centre, Bhopal on 4th November, 2023 (Participants: 34).
- Innovation Hub workshop on ‘Robotics’ was organised by the Innovation Hub of District Science Centre, Dharampur, in collaboration with Bayer Vapi Pvt. Ltd. from 17th to 19th November, 2023 (Participants: 2).
- ‘Test Your Experimental Skills’ was organised by the Innovation Hub of District Science Centre, Dharampur, in collaboration with Bayer Vapi Pvt. Ltd. on 19th November, 2023.
- Workshop on ‘Electronics’ was organised by the Innovation Hub of District Science Centre, Dharampur from 17th to 19th November, 2023 (Participants: 10).
- Innovation Hub Workshop was organised by the Innovation Hub of Regional Science Centre & Planetarium, Calicut on 20th November, 2023.
- Workshop on ‘Exciting Chemistry’ on 23rd November, 2023 and Workshop on ‘Mathematics’ on 24th November, 2023 were organised by Innovation Hub of District Science Centre, Gulbarga.
- 06 Hands-on Sessions on ‘DNA isolation’ and ‘Fantastic Chemistry’ were organised by the Innovation Hub of National Science Centre, Delhi in November, 2023 (Participants: 300 students from different schools of Delhi).
- Innovation Festival was organised by the Innovation Hub of Regional Science City, Lucknow from 20th to 22nd November, 2023. A series of activities namely: Project Display Contest, Robotics Competition, Workshop on Reverse Engineering, Family Innovative challenges, Workshop on Innovative Teaching, Workshop on Aroma oil products and candle making, demonstration of innovators and popular talk were organised as a part of the programme.
- Session on Biology/ DNA Isolation was organised by Innovation Hub of Regional Science City, Lucknow on 16th November, 2021.

- Workshop on Robotics - 'Design Your First Rover' was organised by Innovation Hub of Birla Industrial & Technological Museum, Kolkata, on 23rd and 24th December, 2023 (Participant: 67).
- Sessions on 'Microbiology' and 'Daytime Astronomy' were organized by the Innovation Hub of Nehru Science Centre, Mumbai on 16th December, 2023 (Participants: 16 students).
- Innovation Festival was organised by Raman Science Centre & Planetarium, Nagpur from 19th to 23rd December, 2023.
- 8 Orientation Sessions on topics such as 'Cell division', 'Inverse Law', 'The Origin and evolution of Life on the earth', 'Cycloid-Epicycloid and hypocycloid', 'Fun with Physics', 'Pedigree Tree' and 'Trigonometric Function', 'Calculator' were organized by Regional Science Centre, Bhopal in December, 2023 (Participants: 35 students).
- 'Test Your Experimental Skills' was organized by the Innovation Hub of District Science Centre, Dharampur in collaboration with Bayer Vapi Pvt, Ltd. and BASE on 17th December, 2023 (Participant: 20 students).
- Workshop on 'Practical Biology' was organized by the Innovation Hub of District Science Centre, Gulbarga on 21st December 2023 (Participant: 57 students and teachers).
- Three (03) Innovation Sessions on the topics like 'DNA isolation' and 'Fantastic Chemistry' etc. were organised by the Innovation Hub of National Science Centre, Delhi in December, 2023 (Participant: 123 students from different schools of Delhi).
- Innovation Session on 'Peep into the Cell' was organised by Innovation Hub of Regional Science City, Lucknow on 24th December, 2023 (Participants: 23 school students).
- Innovation Session on 'Physics' was organised by Innovation Hub, Regional Science City, Lucknow on 25th December, 2023 (Participant: 18 students).
- Hands-on Workshop on 'Basic Electronics Sensors' was organized by the Innovation Hub of Bardhaman Science Centre, Bardhaman on 30th January, 2024 (Participants: 63 members).
- Integrated Science Workshops on 'Physics' on 13th January, 2024; 'Chemistry' on 20th January, 2024 and 'Life Science' on 27th January, 2024 were organised by the Innovation Hub of Nehru Science Centre, Mumbai.
- 06 Orientation Sessions and 01 'Kabad Se Jugad' Session on the topics 'Cartesian Diver', 'Boyle's Syringes', 'Global Environmental Changes', 'Convection of Air', 'Maglev Pen', 'Coin Battery', 'Investigate Alien Genetics' etc. were organised by the Innovation Hub of Regional Science Centre, Bhopal during January, 2024 (Participants: 21 students).
- Workshop on 'Light and its Properties' was organised by the Innovation Hub of Goa Science Centre, Panaji on 7th January, 2024 (Participants: 32 students).
- Popular Science Lecture on 'Mysteries of the Cosmos' was organized by the Innovation Hub of Goa Science Centre, Panaji on 21st January, 2024 (Participants: 45 people).
- Experimental Skill Test was organised by the Innovation Hub of Goa Science Centre, Panaji in collaboration with Bombay Association for Science Education (BASE) on 28th January, 2024 (Participants: 9 students).
- Teachers' Training Programme was organised by the Innovation Hub of Goa Science Centre, Goa, in collaboration with Vigyan Parishad Goa and Bombay Association for Science Education from 29th to 30th January, 2024 (Participants: 20 teachers).
- Activities on 'Integrated Science' and 'Robotics' were organized by the Innovation Hub of District Science Centre, Dharampur, on all the Saturdays and Sundays in January, 2024 (Participants: 20 members).
- Workshops on 'Robotics', 'Cyber Security', and 'Astro Voyage with Telescope' etc. under Vigyan Jyoti programme were organised by the Innovation Hub of District Science

Centre, Dharampur at PM Shri JawaharNavodayaVidyalaya in Saputara on 8th and 9th January, 2024 (Participants: 250 students).

- Training Programme on ‘Oyster Mushroom Cultivation’ was organised by the Innovation Hub of District Science Centre, Dharampur at Government Science College, Bhilad, from 10th to 11th January, 2024 (Participants: 37).
- Sessions on ‘Arduino Programming & Robotics’ were organised by Innovation Hub of Visvesvaraya Industrial & Technological Museum, Bangalore from 20th January, 2024 on every Saturday.
- Exposure Visit of school students was organised by the Innovation Hub of Regional Science Centre and Planetarium, Calicut on 22nd January, 2024.
- Innovation Fair was organised by Innovation Hub of District Science Centre, Gulbarga on 30th & 31st January, 2024 (Participants: 1855 students and general public).
- Hands-on Sessions on ‘Robotics’, ‘Electronics’, ‘Biotechnology’, ‘Physics’ and ‘Computer Science’ were organised by the Innovation Space of National Science Centre, Delhi in January, 2024.
- Hands on Workshop for school students was organised at Innovation Space of National Science Centre, Delhi on 30th January, 2024.
- Session on ‘Electricity & Circuit’; ‘Respiration in Organism’; ‘Exploring Microscopic World’; ‘Robotics’ were organised by the Innovation Hub of Regional Science City, Lucknow on 10th, 18th, 24th and 31st January, 2024 respectively.
- Sessions on ‘Spirometer & Lungs Capacity Measurement’ on 10th January, 2024 (Participants: 38 students); ‘Gravity & Concept of Gravitation’ on 10th January, 2024 (Participants: 30 students); ‘Robotics’ on 24th January, 2024 (Participants: 10 students); were organised by the Innovation Hub of Regional Science City, Lucknow.
- Innovation Festival was organised by Regional Science Centre, Guwahati in collaboration with National Innovation Foundation (NIF) from 22nd to 23rd February, 2024.
- Eastern India Innovation Festival 2024 was organized by Digha Science Centre, Digha from 15th to 16th March, 2024. A host of competitive & non-competitive events like Model Display, Nature Trail Programme, KaviSammelan & Cultural Programme etc. were organized for groups of school and college students of different eastern states of India.

Important Activities/Programmes/Events Organized by Innovation Hubs During 2024–25:

- Workshop on theme ‘Tod-FodkeJod’ was organized by Regional Science City Lucknow and Council of Science and Technology, Uttar Pradesh from 18th to 19th September, 2024 at District Fatehpur (Aspirational District of UP).
- ‘Build from Scrap’ Workshop was organised by the Innovation Hub at Regional Science City, Lucknow on 25th August, 2024.
- *Activity based Workshop on ‘Bio-Science’ was organised by the Innovation Hub of Regional Science Centre, Bhubaneswar on 7th & 8th September, 2024.*
- 3 (three) educational sessions on educational tools, Kabaad-se-Jugaad, Chemistry and fostering creativity & sustainability by transforming plastic bottles into art were organized by Innovation Hub of Nehru Science Centre, Mumbai on 14th, 21st and 28th September 2024 (Participants: 30 people).
- 13 Orientation Sessions on Turbo Air Ventilator, Video Editing, Endocrinology, Endocrine System, Probability Curve, Robotics, 3D Endocrine System, How to Generate

Ideas for Innovation, Antigravity Marble, Magical Chemistry, Ball Illusion and How Fish Sink and Float were organized by Innovation Hub of Regional Science Centre, Bhopal in the month of September 2024. Additional 3 workshops on ‘Digital Transformation in Life Science’ were also organized from 12th September 2024 to 13th September 2024 (Participants: 45 students).

- Innovation Hub of District Science Centre, Dharampur participated in robotics competition ‘Robofest 2024’ held at Sarvjanik College of Engineering and Technology (SCET), Surat from 20th to 21st September 2024 (Participants: 60 teams).
- Workshop on Innovation Reverse Engineering ‘Tod FodkeJod’ was organised by the Innovation Hub of Regional Science City, Lucknow in collaboration with Council of Science & Technology (U.P.) on 2nd & 3rd September, 2024 at Govt. Schools of District Chitrakoot, Uttar Pradesh.
- A practical skill-based assessment titled ‘Test Your Experiment Skills 2024 Level 1’ was organized by the Innovation Hub of District Science Centre, Dharampur on 1st September 2024 (Participants: 20 students).
- Innovation Hub of District Science Centre, Dharampur commemorated National Nutritional Week by organizing a workshop on preparing nutritious foods on 4th September 2024 at the centre (Participants: 35 students).
- Innovation Hub of District Science Centre, Dharampur participated in robotics competition “Robofest 2024” held at Sarvjanik College of Engineering and Technology (SCET), Surat from 20th to 21st September 2024 (Participants: 60 teams).
- 3D Printing Session was organized by Innovation Hub of District Science Centre, Dharampur on 27th September 2024.
- *Workshop on Innovation Reverse Engineering ‘Tod FodkeJod’ was organised by the Innovation Hub of Regional Science City, Lucknow in collaboration with Council of Science & Technology (U.P.) on 2nd & 3rd September, 2024 at Govt. Schools of District Chitrakoot, Uttar Pradesh.*
- Workshop on theme ‘Tod-FodkeJod’ was organized by Regional Science City Lucknow and Council of Science and Technology, Uttar Pradesh from 18th to 19th September, 2024 at District Fatehpur (Aspirational District of UP).
- 07 nos. Innovation Sessions on different topics were organised by Regional Science City, Lucknow on 1st, 3rd, 6th, 8th, 15th & 22nd September 2024. During the session students learnt about the water level indicator, cam & follower based toy, tap dispenser, discovery of magnets difference in magnetic and non-magnetic materials, conductors, non-conductors, robotics, rain detector and wind mills.
- 03 Workshops on ‘Tod PhodkeJod’ were organised by the Innovation Hub of Regional Science City, Lucknow on 4th, 14th & 25th September, 2024. During the session students learn how to safely disassemble and reassemble gadgets using proper tools.
- 02 Workshops on ‘Build from Scrap’ were organized by the Innovation Hub of Regional Science City, Lucknow on 8th & 15th September, 2024.
- Innovation Fair - ‘Catch Them Young’ was organised by Regional Science Centre, Bhubaneswar with the knowledge partner of Bhubaneswar City Knowledge Innovation Cluster Foundation (BCKIC) at KIIT University on 25th November, 2024.
- Innovation Festival was organised at National Science Centre, Delhi on 18th & 19th January, 2025 (Participants: 1500). Some other events like Family Innovative Challenge, Family Science Quiz, Creative Robo Contest, Popular Science Lecture and Idea Contest were also organised.
- InnoFest Programme was organized by Regional Science City, Lucknow in collaboration with Agastya International Foundation from 23rd to 24th January, 2025 (Participants: 2000 students from 8 different schools).

- Anveshana Programme was organized by Regional Science City, Lucknow in collaboration with Agastya International Foundation from 29th to 30th January 2025 (Participants: 1850 students from 12 different schools).

**ANNEXURE REFERRED TO IN REPLY TO PART (C) OF LOK SABHA UNSTARRED
QUESTION NO. 1620 FOR 13.03.2025**

Collaborative Programmes with International Organizations

Year 2020-2021

- The Science Film Festival 2020 was organised by NCSM in collaboration with Goethe-Institut/Max Mueller Bhavan through the network of various science centres of NCSM spread across India. From October until 20th of December 2020 the festival films were accessible for streaming on Vimeo, which also offered correlated teaching material and reached more than 10,000 viewers in India.
- NCSM developed the Exhibition 'Superbugs: The End of Antibiotics?' in collaboration with Science Museum Group, London and supported by Wellcome, UK and ICMR, India. The exhibition was inaugurated virtually at Visvesvaraya Industrial and Technological Museum (VITM), Bangalore on November 23, 2020. The exhibition was on display up to 3rd January 2021. Later on, the exhibition was inaugurated at Science City, Kolkata. The exhibition was on display from January 25 to February 28. A host of activities like Live Puppet shows, a Cross-talk on 'Impact of Superbugs in our lives', popular lectures, hands-on workshops and general Quizzes.
- An International Workshop titled 'Train the Trainer' was organized by Visvesvaraya Industrial and Technological Museum, Bangalore on November 20, December 4 & 18 in collaboration with Australian Consulate-General, Chennai conducted by Dr. Stuart Kohlhagen. 57 Teachers participated in the workshop.

Year 2021-2022

- Webinar on 16th anniversary Yuri Gagarin 's flight into space in collaboration with Russian House on 12th April, 2021.
- NCSM In collaboration with Science Museum Group, London constituted an ordinance research survey for the International Exhibition "Hunt for the Vaccine"
- NCSM In collaboration with Science Museum Group, London constituted an ordinance research study on 'Feed the World.' In August 2021. The objective of the research is to discover public attitudes towards global food sustainability.
- International Conference on 'Science Museum & Science Centre Movement in India' was jointly organized by National Council of Science Museums & National Centre for Science Communicators (NCSC) at NCSM (Headquarters), Kolkata and Nehru Science Centre, Mumbai on 1st & 2nd September, 2021.
- NCSM participated in 'Reimagining Museums of India: A Global Summit' organized by the Ministry of Culture, in partnership with Bloomberg on 15th & 16th February, 2022.

Year 2022-2023

- Temporary exhibition on ‘The Art of Science’ was organized at National Science Centre Delhi with support from Embassy of Israel on 18th May, 2022. The exhibition consists of panels depicting the artistic side of the science.
- New Travelling Exhibition on ‘Vaccines: Injecting Hope’ was inaugurated by Shri Arjun Ram Meghwal, Hon’ble Minister of State for Culture and Ministry of Parliamentary Affairs, Govt. of India at National Science Centre, Delhi on 15th November, 2022. The exhibition was conceptualized, designed and developed by NCSM in collaboration with Science Museum Group, London, Wellcome, Indian Council of Medical Research (ICMR) and British Council.
Subsequently, the exhibition was on display at National Science Centre, Delhi (from 15th November, 2022 to 18th June, 2023); Raman Science Centre & Planetarium, Nagpur (from 5th August, 2023 to 31st December, 2023); Nehru Science Centre, Mumbai (from 10th February, 2024 to 28th July, 2024). The exhibition is presently on display at Visvesvaraya Industrial and Technological Museum (VITM), Bangalore from 10th September, 2024 onwards.

Year 2023-2024

- Team India bagged a gold, silver, and bronze medal at the 2nd International Olympiad on Astronomy and Astrophysics-2023 for juniors at Volos, Greece held during 24th to 30th September, 2023. NCSM facilitates the participation of Indian students in this prestigious Olympiad.

Year 2024-2025

- A Memorandum of Understanding (MoU) has been signed between NCSM and Science Museum Group, London, one of the leading Science Museums of the World, for conducting professional workshops on the design and development of special exhibitions, gallery redevelopment and other programming related to STEM and for Professional exchange, on 10th September, 2024 at Visvesvaraya Industrial & Technological Museum, Bangalore.
- India participated in the 3rd International Olympiad on Astronomy and Astrophysics for Juniors (IOAA-Jr 2024) held in Kathmandu, Nepal during 3rd to 10th October 2024. 3 participants were selected among the 20 participants from Orientation-Cum-Selection-Camp (OCSC) held at Nehru Science Centre, Mumbai during May 2024. The Indian team, comprising three participants and two leaders, performed excellently and won two gold medals, and a silver medal. NCSM facilitates the participation of Indian students in this prestigious Olympiad.
- ‘STEM Learning and Engagement Programme’ under Great Challenge Fund project of Govt. of UK at Science Museum Group, London from 3rd to 7th March, 2025. A total of 20 Science Museum Professionals and STEM Teachers from India participated in the programme.
