



CBSE/Sk. Ed./JS/2019

Date: 03.09.2019
Circular No: 47/2019

To
The Heads of all Institutions
Affiliated to CBSE

Subject: Invitation to participate in the 'IBM-CBSEAI K-12 Curriculum' implemented by CBSE and IBM

Greetings from CBSE!

1. Three types of mass revolutions have shaped mankind: Agricultural, Industrial, and Information. Each brought progression and benefits to the society but resulted in new skill requirements. It would be fair to say that the next phase of information revolution is Artificial Intelligence (or AI). AI has the potential to overcome the physical limitations of capital and labour and open new sources of value and growth.
2. Aiming to ensure that current students are AI workforce ready, the Central Board of Secondary Education (CBSE) introduced AI as a skill subject for Grade 9-10 alongwith a 12-hour 'Inspire' module for class 8. In line with these developments, CBSE is working towards building the IBM-AI K-12 Curriculum in collaboration with IBM India, targeting Grade 11 and Grade 12 teachers and students. We need to give youth the opportunity to learn and understand AI-based concepts and technologies that they already experience in their everyday lives that will help them build a better world for themselves and be connected with the careers of tomorrow. AI readiness with an innovation readiness mind-set can propel students to achieve limitless possibilities.
3. The course comprises a suite of research-informed readings, tailored online, face-to-face and in-school work with colleagues assisted by online support from expert facilitators. Participants will develop Artificial Intelligence (AI) knowledge, skills and values through engaging with multi-media online resources, as well as hands-on activities and sequencing of learning experiences.
4. **About the Programme:** In Phase I of implementation, the programme will focus on PGT's and students in Delhi-NCR, Bangalore, Hyderabad, Chennai, Kolkata and Bhubaneswar. The programme will consist of the following 3 stages:
 - **Stage 1: Orientation Workshop for Principals / School Leaders:**
A half-day orientation workshop on the significance of AI as an emerging technology and the need to foster an AI-ready and innovation-ready ecosystem for educators and students.
 - **Stage 2: Teacher Training:**
A 2½ day teacher training workshop to help build foundational skills of Artificial Intelligence (AI) through a customized curriculum, that can enable teachers to guide and mentor students on solving problems and innovating around AI.

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➤ **Stage 3: AI - Enabled SEWA Programme for Students:**

A 5-stage training programme for students that will be conducted by IBM trained experts in select schools in Bangalore, Hyderabad and Delhi, to foster student innovation and make them innovation and AI-ready. Selected top students and their teacher mentors will be provided showcase opportunities at various national events organized by CBSE and international showcase opportunity at the "Activate AI summit" at UC Berkeley College of Engineering, California, USA.

5. Participation in the programme: To participate in Phase I of the IBM-CBSE-AI K-12 Curriculum programme please follow the steps below:

- Register with your school details using the link: <https://forms.gle/aSB93iK5brnAPAFf9>
- As part of the registration process, the applicant school will also be required to fill in a short survey questionnaire: <https://forms.gle/9QuzvU5Y27FSeCx8>
- Please complete the registration process by **9th September 2019 by 12.00 noon**.
- Upon completion of the registration form and survey questionnaire, selected schools will receive a confirmation of participation in the programme along with some pre-read material on AI for their teachers and students, as a preparatory step towards the training programme.

6. PLEASE NOTE:

- From all the applications received, only 1000 schools will be shortlisted to be eligible to participate in this teacher training programme.
- Please note that the teachers who have attended the training programmes conducted by Intel, Adobe or Microsoft in the last six months should not apply/register for this programme.

7. For any programme related queries and support, contact us at the below details:

- For student programme related queries: Mr. Saffin Mathew at aiforhighschools@gmail.com
- For teacher training prog. related queries: Ms. Gayathri Gurumurthy at ai4teachers@gmail.com
- Department of Skill Education, CBSE at skilleducation.cbse@gmail.com

8. Please refer to the annexure for more details and schedule for each stage of the programme.

Biswajit Saha

(Dr. Biswajit Saha)
Director (Training and Skill Education)

Encl.: Details and schedule of the programme.



Copy to the respective Heads of Directorates, Organizations and Institutions as indicated below with a request to disseminate the information to all the schools under their jurisdiction:

1. The Commissioner, Kendriya Vidyalaya Sangathan, 18-Institutional Area, Shaheed Jeet Singh Marg, Delhi-110016.
2. The Commissioner, Navodaya Vidyalaya Samiti, B-15, Sector-62, Institutional Area, Noida 201309 3.
3. The Director of Education, Directorate of Education, Govt. of NCT of Delhi, Old Secretariat, Delhi-110054
4. The Director of Public Instructions (Schools), Union Territory Secretariat, Sector 9, Chandigarh-160017
5. The Director of Education, Govt. of Sikkim, Gangtok, Sikkim –737101
6. The Director of School Education, Govt. of Arunachal Pradesh, Itanagar –791 111
7. The Director of Education, Govt. of A&N Islands, Port Blair - 744101
8. The Director, Central Tibetan School Administration, ESSESS Plaza, Community Centre, Sec 3, Rohini
9. The Additional Director General of Army Education, A – Wing, Sena Bhawan, DHQ, PO, New Delhi-110001
10. The Secretary AWES, Integrated Headquarters of MoD (Army), FDRC Building No.202, Shankar Vihar (Near APS), Delhi Cantt-110010
11. All Regional Directors/Regional Officers of CBSE with the request to send this circular to all the Heads of the affiliated schools of the Board in their respective regions for compliance.
12. All Director/Heads/ In-Charges, COEs of the Board with request to disseminate the information
13. All Joint Secretary/Deputy Secretary/Assistant Secretary, CBSE
14. In charge IT Unit with the request to put this circular on the CBSE Academic website
15. The Public Relations Officer, CBSE
16. PS to Chairperson, CBSE
17. SPS to Secretary, CBSE
18. SPS to Controller of Examinations, CBSE
19. SPS to Director (Information Technology), CBSE
20. SPS to Director (CTET)
21. SPS to Director (Edusat)
22. SPS to Director (Academics) CBSE.
23. SPS to Director (Professional Exam), CBSE
24. SPS to Director (Skill Education), CBSE

Director (Training and Skill Education)



IBM-CBSE AI K-12 Curriculum

Need for the Program

What is AI and why is it important today?

The advent of digital technologies, social media and Internet of Things is resulting in huge amounts of data being created. It is a famous saying today that data never sleeps!

AI is a discipline in computer science that focuses on developing intelligent machines, machines that can learn and then teach themselves. These machines, then, can process vast amount of data than humans can, and several times faster. However, AI can go across all disciplines to change the world for the better– from creating new healthcare solutions, to designing hospitals of the future, improving farming and our food supply, helping refugees acclimate to new environments, improving educational resources and access, and even cleaning our oceans, air, and water supply. The potential for humans to improve the world through AI is endless, as long as we know how to use it.

About the Program & Program Schedule

In Phase I of implementation, the program will focus on Grade 11 teachers and students nominated by CBSE in Delhi-NCR, Bangalore, Hyderabad, Kolkata, Chennai and Bhubaneswar. The program will work at the following levels:

Stage 1: Orientation Workshop for Principals / School Leaders

- A half-day orientation workshop will be conducted on the significance of AI as an emerging technology and the need to foster an AI-ready and innovation-ready ecosystem for educators and students.
- Participating schools need to be represented by their Principals/School Head, accompanied by a teacher who will undergo the AI teacher training program will carry on the AI program in the school.
- The program timings will be between **09.00 am – 01.00 pm**, where the participants will be briefed on the AI curriculum, Teacher Training agenda, Student Mentoring program and the expectations from the school for participation.
- The schedule for the Principal Orientation workshops is as follows:
(Note: Any changes in the below schedule will be informed to the concerned parties)

S. No.	DATE	CITY	VENUE SCHOOL
1.	11-12-13 Sep 2019	Delhi	Springdales School, Pusa Road, New Delhi
2.	19-20-21 Sep 2019	Delhi- NCR	DLF Public School , Sector 2, Rajender Nagar, Sahibabad, Block 2, Rajendra Nagar, Ghaziabad, Uttar Pradesh 201005

3.	19-20-21 Sep 2019	Bangalore	Delhi Public School, Survey No 35/1A, Off Bellary Road, Jalla Hobli, Bagalur Post, Sathnur Village, Bengaluru, Karnataka 562149
4.	19-20-21 Sep 2019	Kolkata	Sushila Birla Girls School, 7, Moira Street, Elgin, Kolkata, West Bengal 700017
5.	23-24-25 Sep 2019	Bhubaneswar	DAV Public School, Chandrashekharapur, Chandrasekharapur Road, Sailashree Vihar, Chandrasekharapur, Bhubaneswar, Odisha 751021
6.	26-27-28 Sep 2019	Chennai	Bhartiya Vidya Bhawan's Rajaji Vidyashram No. 6, Kilpauk Gardern Road, Kilpauk Chennai 600010
7.	26-27-28 Sep 2019	Hyderabad	Delhi Public School, Plot No.44, Telephone Exchange, 42A, Nacharam - Mallapur Rd, behind Nacharam, Durga Nagar, Nacharam, Hyderabad, Telangana 500076

Stage 2: Teacher Training

After the orientation workshop, nominated teachers from the participating schools will go through a 2½ day teacher training workshop.

- The objective of the training program is to help build foundational skills of Artificial Intelligence (AI) through a customized curriculum, that can enable teachers to guide and mentor students on solving problems and innovating around AI.
- The training will be a learning pathway to develop skills and knowledge based on two themes: 'Digital foundations' and 'Role-based learning', leading to IBM certified badges for teachers.
- The curriculum for the teacher training program has been developed to accommodate teachers from diverse backgrounds (i.e. teachers with/without AI/Computer Science background).
- 1000 teachers from 1000 schools (CBSE affiliated) across Delhi-NCR, Bangalore, Chennai, Hyderabad, Kolkata and Bhubaneswar will undergo AI training.
- Participating teachers will be given some project ideas to work with their students, post the training workshop.
- The schedule for the Teacher Training workshops is as follows:
(Note: Any changes in the below schedule will be informed to the concerned parties)

S. No.	DATE	CITY	VENUE SCHOOL
1.	11-12-13 Sep 2019	Delhi	Springdales School, Pusa Road, New Delhi
2.	19-20-21 Sep 2019	Delhi- NCR	DLF Public School , Sector 2, Rajender Nagar, Sahibabad, Block 2, Rajendra Nagar, Ghaziabad, UP- 201005
3.	19-20-21 Sep 2019	Delhi- NCR	Bal Bharti Public School, Sector 21, Noida
4.	19-20-21 Sep 2019	Bangalore	Delhi Public School, Survey No 35/1A, Off Bellary Road, Jalla Hobli, Bagalur Post, Sathnur Village, Bengaluru, Karnataka 562149
5.	19-20-21 Sep 2019	Kolkata	Sushila Birla Girls School, 7, Moira Street, Elgin, Kolkata, WB - 700017

S. No.	DATE	CITY	VENUE SCHOOL
6.	23-24-25 Sep 2019	Delhi- NCR	Blue Bells Public School, Sector 10, Gurugram
7.	23-24-25 Sep 2019	Kolkata	Apeejay School, Park Street, Kolkata
8.	23-24-25 Sep 2019	Bhubaneswar	DAV Chandrashekharapur, Bhubaneswar
9.	26-27-28 Sep 2019	Chennai (02 batches)	Bhartiya Vidya Bhawan's Rajaji Vidyashram No. 6, Kilpauk Gardern Road, Kilpauk Chennai
10.	26-27-28 Sep 2019	Delhi	The Mother's International School, Sri Aurobindo Marg, New Delhi-16
11.	26-27-28 Sep 2019	Bangalore	Kendriya Vidyalaya, Bangalore/ Sri Sri Ravi Shankar Vidya Mandir, Bangalore
12.	26-27-28 Sep 2019	Hyderabad	Delhi Public School, Plot No.44, Telephone Exchange, 42A, Nacharam - Mallapur Rd, behind Nacharam, Durga Nagar, Nacharam, Hyderabad, Telangana 500076
13.	3-4-5 Oct 2019	Delhi- NCR	Gurukul - The School, NH-24, 28 kms Delhi Milestone, Ghaziabad, U.P.- 201015
14.	3-4-5 Oct 2019	Hyderabad	Sanskriti School, Golden Tulip Estate, Ragavendra Colony, Kondapur, R.R. Dist. Hyderabad-500 084
15.	10-11-12 Oct 2019	Delhi	Sadhu Vaswani International School For Girls, 2nd Street, Shanti Niketan, New Delhi-110021
16.	10-11-12 Oct 2019	Delhi	Kendriya Vidyalaya , Delhi
17.	10-11-12 Oct 2019	Bangalore (02 batches)	Delhi Public School, Survey No. 43/1B & 45,Sulikunte Village Sarjapur Road, Bangalore
18.	10-11-12 Oct 2019	Bhubaneswar	SAI International School, Plot -5A, Infocity Ave, Chandrasekharapur, Bhubaneswar, Odisha 751024

Stage 3: AI- Enabled SEWA Program for Students

- The AI-Enabled SEWA Program will be conducted by IBM trained experts in select schools with ATLs in the regions of Delhi, Bangalore and Hyderabad.
- The program is an opportunity to foster student innovation and make them innovation and AI-ready
- Students from the selected schools will go through a 5-stage process:
 - Stage 1:** AI- Thon - an accelerated orientation on AI
 - Stage 2:** UNBox AI - Ideation and innovation workshop on select areas for AI deployment
 - Stage 3:** Rapid prototyping - students make a minimum viable prototype
 - Stage 4:** Capstone Project with Mentoring- Top 3 students from each school will be provided hands on student training and mentoring by IBM experts for advanced prototype development and on ground implementation of projects
 - Stage 5:** Showcase- Top 40 students from across schools will be selected for Capstone Project showcase in appropriate national and international forums
- A total of 36 hours of training and mentoring will be provided through Stages 1-5

- Stage 1,2 and 3 will take place in September and October and the schedule for the same will be made available closer to the training dates to the participating schools
- In Stage 4,5 the selected top students and their teacher mentors will be provided showcase opportunities at various national events organized by CBSE in November - December 2019 and January 2020 and an International showcase opportunity at the “Activate AI summit” at UC Berkeley College of Engineering, California, USA in June 2020.
- The schedule for the student mentoring programmes is as follows:
(Note: Any changes in the below schedule will be informed to the concerned parties)

LOCATION	MONTH	SCHOOL SET 1	SCHOOL SET 2	SCHOOL SET 3
DELHI	SEP – WEEK 3	AI – THON: ORIENTATION		
	SEP – WEEK 4		AI – THON: ORIENTATION	
	OCT – WEEK 1	UNBOX AI: WORKSHOP		AI – THON: ORIENTATION
	OCT – WEEK 2	RAPID PROTOTYPING	UNBOX AI: WORKSHOP	
	OCT – WEEK 3		RAPID PROTOTYPING	UNBOX AI: WORKSHOP
	OCT – WEEK 4			RAPID PROTOTYPING
BANGALORE	OCT – WEEK 1	AI – THON: ORIENTATION		
	OCT – WEEK 2		AI – THON: ORIENTATION	
	OCT – WEEK 3	UNBOX AI: WORKSHOP		
	OCT – WEEK 4	RAPID PROTOTYPING	UNBOX AI: WORKSHOP	
	NOV – WEEK 1		RAPID PROTOTYPING	
HYDERABAD	OCT – WEEK 2	AI – THON: ORIENTATION		
	OCT – WEEK 3			
	OCT – WEEK 4	UNBOX AI: WORKSHOP		
	NOV – WEEK 1	RAPID PROTOTYPING		

Requirements from the school to participate in the student program

- Auditorium or appropriate space to conduct the student workshops
- Projector and speaker setup
- Access to ATL Lab in the school
- A subject teacher or SEWA co-ordinator assigned as co-ordinator for the student mentoring program