



# केन्द्रीय माध्यमिक शिक्षा बोर्ड

( शिक्षा मंत्रालय, भारत सरकार के अधीन एक स्वायत्त संगठन )

## CENTRAL BOARD OF SECONDARY EDUCATION

(An Autonomous Organisation under the Ministry of Education, Govt. of India)

CBSE/SE/JS/ATL/2021

September 6, 2021

Circular No. ACAD-76/2021

All the Heads of Schools Affiliated to CBSE

### SUBJECT: ATL SPACE CHALLENGE 2021

The year 2021 has witnessed spectacular accomplishments in the space sector for the entire human race. We are at the crux of the Digital Age, and 'Space Technology and Exploration' is a key focus area which students must discover at a young age to become innovators and entrepreneurs of tomorrow. We are also observing 75 years of India's independence, this year as "Azadi Ka Amrit Mahotsav", an initiative of the Government of India to celebrate and commemorate 75 years of progressive India and the glorious history of its people, culture and achievements.

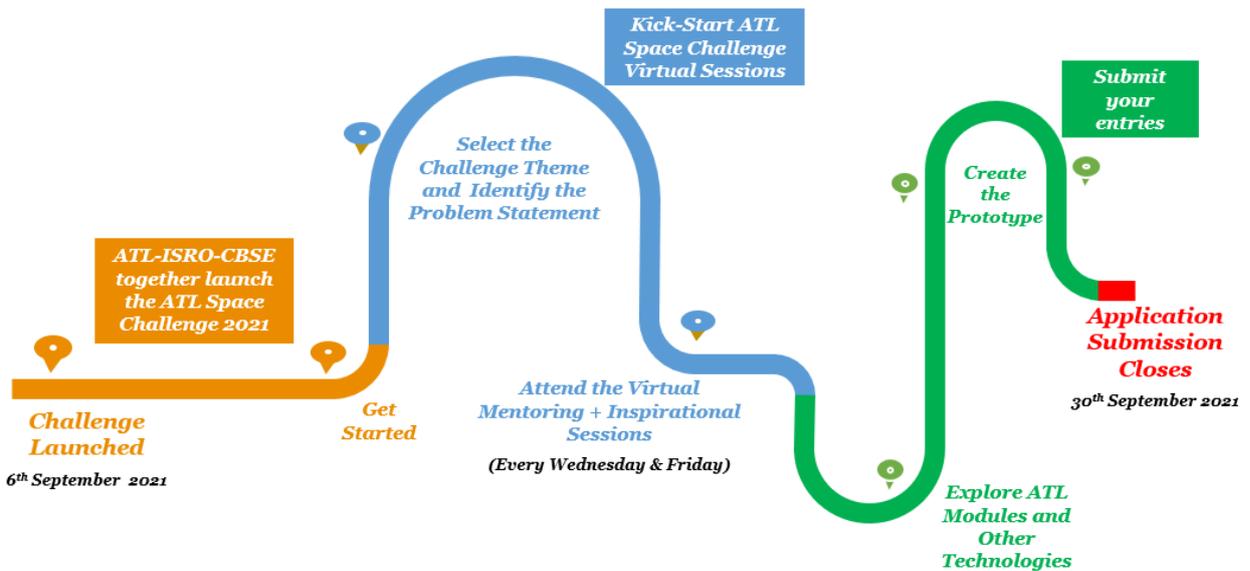
Atal Innovation Mission, NITI Aayog in collaboration with Indian Space Research Organisation (ISRO) and Central Board of Secondary Education (CBSE) has launched the **ATL Space Challenge 2021**.

The ATL Space Challenge 2021 aligns with the **World Space Week 2021** (<https://www.worldspaceweek.org/>) declared by the United Nations General Assembly, and is celebrated from the 4<sup>th</sup> to 10<sup>th</sup> October each year at the international level, to celebrate the contributions of space science and technology.

#### OBJECTIVE

To enable young innovators of schools across the country to learn and engage in creating new, efficient and innovative solutions for specific, real-world challenges in the Space sector and develop solutions which addresses the key problem areas of the challenge.

#### TIMELINE



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### IMPORTANT INSTRUCTIONS FOR STUDENTS

1. Students (from ATL and Non-ATL schools) can submit their entries in the Challenge.
2. The solution/ innovations by the student teams must be aligned to one of the Challenge Themes under which the problems can be identified. Create a solution that can be implemented and adopted leveraging technologies such as:

#### I. Explore Space:

- **Gaming Technology** – Develop Games that inform about space/ planets
- **App Development** – Create an App to raise awareness about space and the outer world
- **Robotics** – Development of robotic system technologies to improve space exploration missions

#### II. Reach Space:

- **3D Technology** – Create a 3D model (virtual or physical) for equipment's, vehicles etc. that can be used to reach space
- **AI/ ML in Space** – Using Artificial Intelligence and Machine Learning capabilities in various areas of space operations and spacecraft maintenance
- **Space Apps** – Develop Mobile Apps to make living in space better/ easier (eg: communication or navigation centric, etc.)

#### III. Inhabit Space:

- **3D Technology** – Solving space exploration problems and developing 3D model designs for 3D printed habitats that can be used in space
- **Healthcare** – Development of life support systems that enable extended human presence in space
- **AI/ ML Technologies** – Create a virtual environment using AI/ ML to simulate the space to prepare humans

#### IV. Leverage Space:

- **Geospatial Technology** – Solutions in disaster management and disaster risk reduction by utilizing geospatial data resources & products (eg: Geographic Information System (GIS), Remote Sensing (RS) and Global Positioning System (GPS) for analysis, modeling, simulations and visualization)
- **Drone Technology** – Design solutions for remotely monitoring and enabling smart and connected rural and urban settlements
- **Visualize Data** – Develop a user-friendly application to discover, visualize, and analyze satellite data for monitoring Earth's conditions (eg: weather, climate, etc.)

**Please Note: Students are free to identify and solve ANY OTHER relevant problem aligning with ANY ONE of the Challenge Themes using ANY OTHER relevant technology (IoT and Sensors/ Electronics/ Drone Technology/ Any Other Technology)**

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3. The application for the Space Challenge to be submitted on the **AIM online portal** (<http://aimapp2.aim.gov.in/atlspace/>).
4. Each team based on their interest and understanding, must select one problem which falls under **ANY ONE** of the Space Challenge themes.
5. Each unique solution must be submitted under one theme only. Submitting the same solution/ innovation under multiple themes will result in immediate disqualification.
6. Students can leverage the **ATL Space Module** ([https://aim.gov.in/pdf/ATL\\_Space\\_Module.pdf](https://aim.gov.in/pdf/ATL_Space_Module.pdf)) (open for all; can be accessed on [www.aim.gov.in](http://www.aim.gov.in)) for the detailed understanding of key concepts. The final innovation can be a physical/ digital solution (App, Game, 3D Design, etc.) developed using any of the **ATL Module/ Platform** (<https://aim.gov.in/atl-curriculum.php>) (open for all) OR on any **Open-Source/ Free platform**.
7. The online application form submission will include:
  - Document submission (description of the innovation/ solution)
  - Video submission (capturing a 360-degree view of the working prototype/ solution)
8. School Teachers, ATL In-Charges and Mentors may support the student teams.
9. Each Team shall consist of **maximum 3 students** (class 6<sup>th</sup> to 12<sup>th</sup>) and one School Teacher/ ATL in-charge. We encourage ATL schools to also include other school and/or community students within the Team Composition.
10. **Kindly note, individual member entry is not allowed. Also if the team size exceeds 3 member limit, the entry/ submission will be immediately disqualified.**
11. This challenge is for Indian students currently enrolled in school (Class VI to Class XII) both from ATL and non-ATL schools, in case your entry is selected as a finalist, the team members may be asked to provide proof in the form of a photo of your school i-card or any other form as deemed appropriate by AIM, NITI Aayog. Failure to do so may result in your entry being disqualified.
12. **The Top teams shall be recognized with interesting opportunities and prizes at the conclusion of the Challenge.**

With Regards

*Biswajit Saha*

Dr. Biswajit Saha

Director (Skill Education & Training)

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**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. 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 Andaman & Nicobar Islands, Port Blair - 744101
8. The Director, Central Tibetan School Administration, ESSESS Plaza, Community Centre, Sector 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. DS to Chairman, CBSE - for kind information of the Chairman, CBSE
12. All the Heads of Department of the Board.
13. All the Regional Directors/Regional Officers/Head-COEs, 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.
14. Head (Media & Public Relations), CBSE
15. Assistant Secretary (IT), CBSE, Rouse Avenue with the request to upload this notification on the CBSE Academic website.
16. Incharge, Hindi Cell, CBSE HQ – for Hindi Translation of this notification.

**Director (Skill Education and Training)**



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