



INTERNATIONAL AEROSPACE OLYMPIAD 2021-22

SYLLABUS: Group A (Grade 3rd - 6th)

- **Aerospace, Aeronautics & Astronautics Concept** – What is Aerospace, Aeronautics & Astronautics? Details of all three topics and how they are related to each other.
- **The forces on an Airplane** - Basic concept on how do airplanes fly and about the forces that help (and hinder) airplane flight.
- **The pressure created by Air** - The concept of air pressure and how air pressure creates a force on an object. Relationship between air pressure and the speed of moving air.
- **Space Mission on Mars & Moon** - Every planned and successful mission of different Space Organization and upcoming mission on moon and mars.
- **Planetary Travel Time** - Time taken by different rockets or satellite for the interplanetary missions.
- **ISRO Launch Vehicle** - Different types of rockets or launch vehicle used by ISRO for their different satellites launch.
- **Earth Atmosphere & Weather** - Different layers of Earth atmosphere and how weather change plays a role for takeoff and landing of Spacecraft.



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SYLLABUS: Group B (Grade 7th - 9th)

- **Aerospace, Aeronautics & Astronautics Concept** - Details of all three topics and how they are related to each other.
- **Evolution of Airplane** - History timeline and beginning of the Aerospace sector in the world.
- **Flight flying mechanism** - Bernoulli principle to understand pressure differences to make airplanes fly.
- **Force & Motion** - Newton's three laws of motion.
- **Life in Space:** Brief study of The International Space Station and all its related facts.
- **Being an Astronaut** - Basic details of Astronauts, Space Suit evolutions, Benefits of suits etc
- **Space Mission on Mars & Moon** - Total Planned mission of different Space Organization and upcoming mission on moon and mars.



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SYLLABUS: Group C (Grade 10th - 12th)

- **Aerospace, Aeronautics & Astronautics Concept** - Details of all three topics and how they are related to each other.
- **Basic of Space Mechanics and Launch Vehicles**
- **Rocket & Missiles** - Brief understanding of Rocket & Missiles, the study of body structures, benefits etc.
- **Aerospace materials** - Materials used in past, present, and future of Aerospace designing and manufacturing.
- **Aircraft Structures** - Study of Aerospace structures include a fuselage, wings, an empennage, landing gear, and a power plant.
- **Space Mission on Mars & Moon** - Total Planned mission of different Space Organization and upcoming mission on moon and mars.
- **Life of an Astronaut** - Basic study of survival of astronaut in space and method to survive on different planets.
- **The forces on an Airplane** - Basic concept on how do airplanes fly and details of all four forces that help airplane flight.



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****IMPORTANT POINTS:**

- Study materials for Group A, B & C will be provided by Spacetrix Aerospace only.
- The study materials will be provided to Registered Participants only.
- The study material will get uploaded on the website soon.
- The exam will be held in the month of June 2021.
- Every participant gets around 6 month to prepare for this International Competition.
- For participation or registration, Visit - <https://spacetrixaerospace.com/registration-form/>
- We wish you all the best for competition.