

INTERNATIONAL AEROSPACE OLYMPIAD 2025



SYLLABUS - GRADE 1ST & 2ND

1. Learning About Aerospace, Aeronautics, and Astronautics

1.1 What is Aerospace?

- Understanding the meaning of aerospace.
- Difference between aeronautics (air) and astronautics (space).

1.2 Introduction to Flying Machines

- Types of flying machines: Airplanes, helicopters etc
- How flying machines help us in daily life (travel, rescue, delivery).

1.3 Astronautics Overview

- Basic concept of rockets and satellites.
- How astronauts travel to space.

2. Learning About Astronomy and Space Science

2.1 The Solar System

- Names and order of planets (focus on features like size and color).
- The Sun: A star that gives us light and heat.

2.2 The Moon

- Why does the Moon shine at night?
- Phases of the Moon: Full Moon, Half Moon, New Moon.

2.3 Stars and Constellations

- Basic introduction to stars and constellations.
- Fun examples like the Big Dipper or Orion.

2.4 Space Exploration

- What are satellites and space probes?
- Introduction to the International Space Station (ISS).

3. Learning About the History of Aviation

3.1 Early Days of Flight

- How people imagined flying in ancient times (kites, myths).
- First flying machine attempts.

3.2 The Wright Brothers

- The story of Orville and Wilbur Wright and their first flight.
- Simple explanation of how their plane worked.

3.3 Development of Modern Aviation

- Introduction to the evolution from simple planes to jets and passenger airplanes.

4. How Airplanes Fly

4.1 Basics of Flight

- Explanation of lift, thrust, drag, and weight (simplified).
- Why airplanes have wings and engines.

4.2 Airplanes and Weather

- How wind, rain, and clouds affect airplane flights.
- Safety measures in flying.

4.3 Airports and Pilots

- What happens at an airport.
- The role of pilots and co-pilots.

5. Famous Astronauts in Aerospace (Indian)

5.1 Rakesh Sharma

- First Indian to go to space: His journey and achievements.

5.2 Kalpana Chawla

- First Indian-origin woman in space.
- Her contributions to space science.

5.3 Sunita Williams

- Indian-origin astronaut: Her space missions and records.

5.4 ISRO (Indian Space Research Organisation)

- Simple introduction to India's space agency.
- Milestones like Chandrayaan and Mangalyaan missions.

