

# Aero Innovators



**Club project spotlights :** The Aero Innovators Club continues to combine creativity with real-world problem solving. This month's spotlight is to research on AquaGuardian – smart drone designed to monitor river pollution and safely remove harmful waste from water bodies.



## Aero Innovators

Dream It. Build It. Fly It.



**Student Voices :** "Working on AquaGuardian made us realize how engineering can directly help nature." - Arham

"Designing a pollution-detecting drone taught us responsibility along with innovation." - Gurpreet

**Club Name:**  
Aero Innovators

**Motto**  
Crafting the future of flight technology

**Manager**

BalwinderKaur

# Project Report and Skill Development

## DEEPER DIVE

Balwinder Kaur- 11/01/2026



### Project Goals:

- To design a drone capable of detecting different types of water pollutants
- To promote environmental protection using technology
- To create awareness about water pollution through real-time data

### Process/ Steps:

- Research on water pollution
- Sensor and design planning
- Drone framework drafting
- Prototype development

### Skills Learned:

- Environmental Science Applications
- Drone Engineering & Aerodynamics
- Sensor Technology & Data Analysis
- Robotics & Mechanical Design
- Team Collaboration & Problem Solving

### Challenges and solutions :

- Challenge: Researching about a safe waste-collection system.
- Solution: A lightweight robotic arm could be used to avoid disturbing aquatic life while removing harmful materials carefully

### Meet the Team :



Rashmeet Kaur- 11A



Gurmanat Kaur- 11A



Jasmeet Kaur- 11A



Chetan Kumar- 11A



Arham Jain- 11A



Gurpreet Singh- 11A



Brahmjot Singh- 11A



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