



PROPELX LABS



For Grade
4th to 12th

DRONE WINTER CAMP

Helping children develop
logical thinking, creativity,
and confidence through
guided hands-on learning.



PROGRAM

At our Drone Winter Camp, students explore the science of flight by designing, building, and flying gliders, MDF drones, and 3D-printed drones.

Through hands-on projects, they learn aerodynamics, engineering basics, and core drone technology.



“Every activity in our program is designed to help children think, build, and solve problems on their own—not just follow instructions.”



WHO ARE WE ?

We are a robotics-first learning lab dedicated to giving children a deep, **hands-on understanding** of how technology really works.

Our programs are **founded by a Robotics Engineer** with a Master's degree in Robotics from the University of Michigan, and experience building **real-world autonomous systems** —from self-driving trucks to assistive robotic devices.



Expert-led programs

Project-driven learning

High Parent Satisfaction

Small-batch classrooms



LEARNING OUTCOMES

- ★ Gain a strong understanding of drones, their components, and the science of flight, including aerodynamics and real-world applications.
- ★ Explore the mechanics of flight through fun, hands-on projects like building and testing paper airplanes and gliders.
- ★ Learn essential drone control, stabilization, and precision flying techniques, building confidence, problem-solving skills, and spatial reasoning.
- ★ Design a custom 3D-printed drone frame, getting hands-on experience with CAD software and witnessing the 3D printing process in action.
- ★ Construct and fly an MDF drone, learning the principles of frame design, electronics, and safe operation.





LEARNING PATHWAYS

SESSION 1

- What is a drone?
- Applications of drones in daily life
- Differences between drones, airplanes, and helicopters
- Understanding aerodynamics: How air creates lift
- Drone components and their functions
- Drone safety rules: Regulations, care, and protection



Make plane model
& understand forces

SESSION 2

- Introduction to 3D design and CAD for drones
- Selecting a drone frame: Why use a plastic drone model
- Qualities of a plastic drone model
- Frame assembly and painting
- Electronics assembly
- Basic flight of a plastic drone



Drone Build
& Fly

SESSION 3

- Introduction to 3D-printed drone design
- Designing a custom drone frame in CAD
- 3D printing live demo
- Assembling a 3D-printed drone
- Flight pathing and obstacle avoidance
- Battery care, safety, and proper handling
- Drone control: Roll, pitch, yaw



3D Design
& Print

SESSION 4

- Final drone flight practice
- Drone racing competition
- Showcase of flying skills
- Celebration and certificate distribution





PROGRAM BENEFITS

- ▶ Project Based Learning
- ▶ 10+ Hours of Learning
- ▶ Exclusive Resources
- ▶ Personalized Kits
- ▶ HW Activity



CERTIFICATE





PROPELX LABS



Register Now

DRONE WINTER CAMP



Modes:

Offline/ Online



Price: ~~12,500~~

8,000

Jan 1, 2026 - Jan 15, 2026



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