Drone Assembly and Piloting

Grades 7–12 · Ages 12–18

A hands-on STEM programme from quadcopter structure to real flying. Students assemble an educational drone from a prepared kit, set it up and prepare it for flight, then learn to pilot on a simulator, on a real drone and in FPV.



Age group:	Format:	Class size:
Grades 7–12 (ages 12–18)	**in person, after-school at the school**	**10–12 students**
Language:	Prior knowledge:	Outcome:
English	**none required**	**certificate of completion**

LEARNING OUTCOMES

- understand UAS structure and the function of quadcopter components;
- take part in assembling and preparing a drone for flight;
- perform simulator exercises and basic manoeuvres on a real drone;
- get introduced to FPV and follow safety rules.

PROGRAMME CONTENT

Introduction	UAS, applications, safety rules
Drone structure	main components and their functions
Assembly	frame and motors, electronics, soldering basics; propellers, checks, first launch
Piloting	simulator, first flights, manoeuvres, obstacle course
FPV	technology basics, goggles, basic exercises
Final assessment	assembly, pre-flight preparation and safe piloting

SESSION STRUCTURE — 60 MINUTES

Introduction	New material	Practice	Wrap-up
topic, review	presentation, demonstration	assembly, simulator, flights, FPV	summary, feedback

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