



3-8 Drones: Flying and Coding with CoDrone

Designed for learners in Grades 3-8

Course Description:

Prepare for the future of autonomous flight with hands-on learning. Students will pilot and program camera-less drones using CoDrone EDU hardware, apply sensor technology, and design solutions for real-world challenges—all while mastering flight principles, safety, and creative problem-solving.

Equipment, Curriculum, and Training Available:

- Classroom set of Drones
- 15 Lesson Hours
- Curriculum and supporting materials
- Ongoing product and curriculum support
- Professional development
- Facilitation by a trained STEM instructor (optional)

LESSONS



LEARNING TARGET EXAMPLES

1. Be Clear of Your Drone Gear	Identify key drone parts and explain their purpose.
2. Staying Aloft & In Control	Explore forces of flight and basic control movements.
3. Practice Makes Good Flight	Execute safe takeoff, hover, and landing procedures.
4. Blockly Basics for Takeoff & Landing	Build program for automated takeoff and landing.
5. Creative Flight Loops	Apply loops and conditionals to create flight patterns.
6. Code Reusability, What's Your Function	Create reusable functions to simplify drone code.
7. Sensing Without Seeing	Program obstacle detection using range sensors.
8. Precision Hovering & Landing	Use sensors for precise control of altitude & landing.
9. Data Time with Sensors Galore	Collect & analyze flight data for improvements.
10. Is Your Drone Weighted Down	Redesign a drone to carry a payload safely.
11. Reconsidering Flight Times	Estimate battery use and adjust for wind conditions.
12. Flight Path Mapping & Optimization	Draw and code an efficient flight path.
13. AI-Public Protection & Disaster Relief	Simulate an AI-based disaster-relief mission.
14. Drone Career Pathways Exploration	Research and present drone careers across sectors.
15. Design Your Most Sophisticated Flights	Design and demonstrate a complete flight mission.