The What, Where, and How of Drones: Simulator

Designed for learners in Grades 3-5

NextWaveSTEM

Course Description:

What exactly is a drone? How do they work? What are they used for? Believe it or not, the first drone was built in 1935. Since then, drones have been used for surveillance, deliveries, search and rescue, wildlife monitoring, and more. They are complex machines that use programming to maneuver them wherever they are needed. This course introduces drone mechanics and allows students to program drone flight using NextWaveSTEM's Drone Simulator software. The sky's the limit with drone technology.

Curriculum, and Training Available:

- 12+ Lesson Hours
- Curriculum and supporting materials
- Ongoing product and curriculum support
- Professional development
- Facilitation by a trained STEM instructor (optional)

Lesson	Learning Target Examples
1. What is a drone?	Identify drones in our world: their uses, mechanics, and safety requirements.
2. Drone Mechanics: Physics, Math, and Science = Flight	Understand how drone flight is possible and begin coding flight plans.
3. Drone Programming	Learn programming commands that control a simulated drone.
4. An Introduction to the Drone Simulator	Explore a virtual city by programming a drone simulator.
5. Advanced Block Programming	Use Loops, Logic, and Variables to code a complex flight path.
6. Drone Delivery: Part 1	Use measurement skills to make virtual deliveries at the mall, hospital, and bank
7. Drone Delivery: Part 2	Code a virtual emergency delivery in the Himalayas.
8. Undercover Drones	Examine how drones are used in surveillance and complete a scavenger hunt.
9. Drones in the Wild: Part 1	Explore how drones are used to track animal populations in the wild.
10. Drones in the Wild: Part 2	Create a virtual drone program to track wildlife and collect data.
11. A Drone of My Own: Part 1	Work together to develop a drone program that helps solve a real-world problem.
12. A Drone of My Own Part 2	Test, troubleshoot and debug a drone program solution!
Career Exploration Modules	Complete interactive missions to experience the real-world uses of drones across different industries!