

LESSON PLAN

Lesson Topic:

Standards:

Objective(s)	Students use problem solving skills to fly a drone in a pattern using block coding
Key Vocabulary	Yaw, Pitch, Roll,
Materials	Mini CoDrones Remotes Batteries laptops, https://codrone.robotlink.com/mini/blockly/ Drone tent
<p>Lesson</p> <p><i>Hook</i></p> <p><i>Presentation</i></p> <p><i>Practice & Application</i></p>	<p>Class Discussion: Class Canvas Discussion - "Name at least 3 things that are tangible that require coding. Why is coding important for things other than video games, or typical computer applications?"</p> <p>Suggest things you might not normally think of, like litter boxes and water bottles.</p> <p>How are drones used? Video Recording, observing and managing crops etc.</p> <p>Explain problem solving process define, prepare, try, reflect, repeat. Explain how this applies to drones:</p> <p>Example: Problem: Need to fly a certain path to observe crops Prepare: Pair Drones, write program Try: Test Flight Reflect: What went right and what went wrong.</p> <p>Repeat: New Problem: What coding changes should be made to correct flight problems. Etc.</p> <p>Students write journal as they work through problem solving process to fly drones. Start them with a specific drone route or let them choose. Give them flight requirements. This will be their first step in the problem-solving process.</p>

<i>Assessment</i>	<p>Journal</p> <ul style="list-style-type: none">4 = 4 applicable and adequate journal entries3 = 3 applicable and adequate journal entries2 = 2 applicable and adequate journal entries1 = 1 applicable and adequate journal entries0 = no attempt <p>Drone Flight</p> <ul style="list-style-type: none">4 = Drone flies correct route3 = Drone flies correct route with less than 3 mistakes2 = Drone flies correct round with 3-4 mistakes1 = Drones flies with 5 or more mistakes0 = Drone did not fly or no attempt made <p>Drone Code</p> <ul style="list-style-type: none">4 = Code meets five coding requirements (flying, flipping, turning, loops, and landing)3 = Code meets four coding requirements2 = Code meets three coding requirements1 = Code meets one or two coding requirements0 = No attempt made
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