

Year 5 – Flight L Plates

90mins Lesson 2

Learning Intentions		Lesson Outcomes
<ul style="list-style-type: none"> Students obtain their flight L (learners) plate Students demonstrate safe use of drones Students revise knowledge of jobs in the industry which use drones and pathways for study to work in these fields 		<ul style="list-style-type: none"> Understand drone rules for flight outdoors and indoors Understand how the Tello drone works Know about drone safety and how to conduct a pre-flight checklist Know how to launch, land, and fly a drone in a square using manual controls Understand the Design Challenge
Australian Curriculum Content Descriptors		Australian Curriculum General Capabilities
<p>Digital Technologies</p> <p>Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)</p> <p>Design and Technologies</p> <p>Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use (ACTDEK023)</p>		<p>Critical and creative thinking – inquiring – identifying, exploring, and organising information and ideas</p> <p>Critical and creative thinking – generating ideas, possibilities, and actions</p> <p>Personal and social capability – Social awareness</p>
Assessment		
<p>Formative assessment</p> <p>Demonstration of ability to launch, land and fly a drone in a square using manual controls in a safe manner.</p>		
Phase/Slide	Learning Activity	Resources
Slide 1 - 3	<ul style="list-style-type: none"> Greetings Introduction Acknowledgement of Traditional Custodians Lesson outcomes 	PowerPoint
Slide 4 -5 Engage	<ul style="list-style-type: none"> Working in teams requires collaboration skills Identifying Computational Thinking skills in lesson – 	PowerPoint

Phase/Slide	Learning Activity	Resources
	decomposition and collaborating	
Slide 6-10 Explore	<ul style="list-style-type: none"> • Explore safety rules for using drones • Discuss safety issues • Discuss privacy issues • Watch the video 'Drone safety rules' explaining drone rules • Ask students to recall some of the rules outlined in the video • Discuss drone safety rules for flying micro drones indoors 	PowerPoint Video: Drone safety rules
Slide 11 – 16 Explain	<ul style="list-style-type: none"> • Getting to know the Tello drone • Discuss the parts of the drone and what they do 	PowerPoint Tello drone to show students
Slide 17 – 23 Elaborate	<ul style="list-style-type: none"> • Discuss the terminology used in drone flying • Watch the video 'Drone blender' • Outline the drone rules for the activities in this lesson • Play each of the slides 'prepare', 'go' and 'stop' to ensure students know what each of these slides mean 	PowerPoint Video: Drones blender
Slide 24-25 Engage	<ul style="list-style-type: none"> • Outline the pre flight checklist • Identify that students will be in groups of 3 (pilot, co-pilot, and visual observer) • Show students the set-up of the space for flight and explain the set up and lanes 	PowerPoint
Slide 26 - 29 Explain	<ul style="list-style-type: none"> • Drones should be set up and ready (already linked to Wi-Fi) • Outline to students how to use the Tello Edu app on the iPad – Important land button 	PowerPoint iPad with Tello Edu app
Slide 30 – 38 Explore	<ul style="list-style-type: none"> • Remind what 'prepare', 'go' and 'stop' mean • Activity 1 - take off and land • Remind about take off and land button • Activity 2 – drive in a square using only 'roll' • Activity 3-drive in a square using 'yaw' and 'roll' 	Tello drones iPad with Tello Edu app One drone and iPad per group of 3

Slide 39 – 43 Evaluate	<ul style="list-style-type: none">• Wrap up• Revise drone jobs from previous lesson	PowerPoint
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