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| **Lesson Plan**  Technology Year 8  Introduction of Basic Flight Controls – Practical  Lesson 2 of 5 | | | |
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| Date: XX Mar 23 | | Topic: Remotely Piloted Aircraft (RPA) | |
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| Outcomes:  Students will be able to manoeuvre a quadcopter Remotely Piloted Aircraft (RPA) within a define space, using yaw, pitch, roll and throttle, safely.  Content Descriptors:  Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions [(ACTDEK031 - Scootle )](http://www.scootle.edu.au/ec/search?accContentId=ACTDEK031)  Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness [(ACTDIP025 - Scootle )](http://www.scootle.edu.au/ec/search?accContentId=ACTDIP025) | | | |
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| Lesson Activities:  Students working in pairs or groups of 3 will be given an RPA to manoeuvre within a defined space. Students will be given instructions to follow, step-by-step, to control the drone and achieve each of the movements.  This will build on a previous lesson about the basic flight controls of an RPA by applying practical skills and how they apply to the RPA.  The movements and controls will have been taught, in theory, during the previous lesson. Further, demonstrations will have also been given, either physically or through video. Whilst it is preferable to demonstrate the manoeuvres practically, by the teacher, however it may not be feasible due to time or the size of the class.  Teacher Activities:  Ensure groups are working safely within the limits of the activity.  Ensure groups are achieving the checklist outcomes.  NB. Do not become too invested in single groups, as an RPA can become dangerous if not monitored closely.  Another supervisor may be required, depending on student numbers and behaviour. | | | |
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| Assessment:  Students were able to achieve all basic movement controls. This will be confirmed and developed in subsequent lessons. |  | | Resources  One drone per group.  Cones to mark working area.  Checklist of manoeuvres to complete. |
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| Notes/Observations  Confirm proposed flight area is safe and clear of obstacles or other traffic, ground and air. Refer to [CASA](https://www.casa.gov.au/drones).  Check RPA serviceability, this will also be done during a theory lesson with students.  Ensure suitable separation is achieved between RPA operators.  Review whether time was sufficient to allow all students to complete the manoeuvres.  Preparation and pack up time must also be allowed for within the timetable. | | | |