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| **1XXXXX** | **Describe aircraft components and principles of aircraft flight** |

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| **Kaupae |** Level | 2 |
| **Whiwhinga |** Credit | 2 |
| **Whāinga |** Purpose | People credited with this skill standard are able to describe aircraft components and the principles of aircraft flight.  This skill standard is intended for learners pursuing foundational knowledge in aviation. |

**Hua o te ako me Paearu aromatawai |** Learning outcomes and assessment criteria

| **Hua o te ako |** Learning outcomes | **Paearu aromatawai |** Assessment criteria |
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| 1. Describe aircraft components and principles of aircraft flight. | 1. Describe major aircraft components in terms of their function. |
| 1. Describe the production of lift by an aerofoil. |
| 1. Describe the major forces acting on a powered aircraft in flight and the effects of primary controls for an aeroplane or helicopter. |

**Pārongo aromatawai me te taumata paearu |** Assessment information and grade criteria

*Assessment specifications:*

The level of knowledge required in this skill standard is that of an introductory nature.

Principles of aircraft flight referred to in this skill standard are applied equally to fixed and rotary winged aircraft in level flight.

*Definitions:*

*Aircraft* refers to both fixed wing aircraft and helicopters.

***Ngā momo whiwhinga |*** *Grades available*

Achieved

**Ihirangi waitohu |** Indicative content

Major aircraft components

* Major components are those such as the fuselage, empennage, undercarriage, ailerons, flaps, vertical and horizontal stabilisers, elevator, rudder, trim tabs, wings or rotors, engine, and propellers.

Principles of flight

* Newton’s Laws of Motion.
* Fluid dynamics.
* Laminar versus turbulent fluid flow.
* Dynamic pressures around aerofoils.
* Aircraft primary controls and major forces.
* Major forces on flight include those such as lift, drag, gravity (weight), and thrust.
* Primary controls that affect aircraft yaw, pitch, and roll through (aeroplane) pedals, yoke, and throttle (or helicopter) yaw pedals, cyclic, collective, and throttle.

**Rauemi |** Resources

* [www.aviation.govt.nz/safety/safety-education-and-advice/education/good-aviation-practice-booklets/pilot-practice/](http://www.aviation.govt.nz/safety/safety-education-and-advice/education/good-aviation-practice-booklets/pilot-practice/)
* [www.sciencelearn.org.nz/resources/299-principles-of-flight](http://www.sciencelearn.org.nz/resources/299-principles-of-flight)

**Pārongo Whakaū Kounga |** Quality assurance information

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| **Ngā rōpū whakatau-paerewa |** Standard Setting Body | Ringa Hora Services Workforce Development Council |
| **Whakaritenga Rārangi Paetae Aromatawai |** DASS classification | Service Sector > Aviation > Aviation - Core |
| **Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga |** CMR | 0112 |

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| **Hātepe |** Process | **Putanga |** Version | **Rā whakaputa |** ReviewDate | **Rā whakamutunga mō te aromatawai |** Last date for assessment |
| **Rēhitatanga |** Registration | 1 | [dd mm yyyy] | N/A |
| **Kōrero whakakapinga |** Replacement information | This skill standard replaced unit standard 20677. | | |
| **Rā arotake |** Planned review date | 30 December 2030 | | |

Please contact Ringa Hora Services Workforce Development Council at [qualifications@ringahora.nz](mailto:qualifications@ringahora.nz) to suggest changes to the content of this skill standard.