

<b>Title</b>	<b>Describe the development of aviation from pre-World War I through to current times</b>		
<b>Level</b>	<b>2</b>	<b>Credits</b>	<b>8</b>

<b>Purpose</b>	People credited with this unit standard are able to describe: early attempts at lighter-than-air and heavier-than-air flight pre-World War I; significant achievements in powered flight pre-World War I in New Zealand and overseas; significant aviation developments during World War I and up to World War II; aviation developments brought about by World War II; the development of the aircraft into a major transport mode post-World War II; the development of military and civil jet aircraft; and current developments in the civil aviation industry.
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<b>Classification</b>	Aviation > Aviation - Core
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<b>Available grade</b>	Achieved
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### Guidance Information

- For the purposes of this unit standard, *significant* means milestones that are described in aviation history textbooks.
- Recommended texts for this unit standard may include but are not limited to – Grant, R.G. (2007) *Flight: 100 years of Aviation* (updated edition London: Dorling Kindersly); Grant, R. G. (2017) *Flight: The complete history of aviation* (Dorling Kindersly Ltd.).

### Outcomes and performance criteria

#### Outcome 1

Describe early attempts at lighter-than-air and heavier-than-air flight pre-World War I.

#### Performance criteria

- 1.1 Different types of lighter-than-air and heavier-than-air aircraft are described.  
Range may include but is not limited to – balloons, kites, wings, parachutes, Zeppelins.
- 1.2 Four significant events in the attempts to achieve heavier-than-air flight in America and Europe are described.

1.3 Three significant events in lighter-than-air flight are described.

Range may include but is not limited to – first successful manned balloon flight, successful navigation attempts, flights using different gases.

## Outcome 2

Describe significant achievements in powered flight pre-World War I in New Zealand and overseas.

### Performance criteria

2.1 The first internationally recognised powered flight in a heavier-than-air machine is described.

2.2 The first claimed powered flight in New Zealand is described.

2.3 Three significant aviation events from around the world are described.

Range may include but is not limited to – crossing the English Channel, first women to fly, crossing the Mediterranean Sea, first flight from the deck of a ship.

## Outcome 3

Describe significant aviation developments during World War I and up to World War II.

### Performance criteria

3.1 The uses of the aeroplane during World War I are described.

Range reconnaissance, air-to-air combat, aerial bombing.

3.2 The progression of aviation is described.

Range crossing oceans, mountain ranges, extremes of temperatures, flying over uncharted territory.

3.3 The use of surplus aircraft after World War I is described.

Range first airlines, first airliners, air mail, air racing.

## Outcome 4

Describe aviation developments brought about by World War II.

**Performance criteria**

4.1 The different roles that aircraft performed during World War II are described.

Range transport of freight and personnel, bombing, air-to-air combat, maritime patrol, reconnaissance.

4.2 The major aircraft of World War II are described.

Range English, American, German, Japanese; two examples of each.

4.3 The development of powerplant technology during World War II is described.

Range Pratt and Whitney, Curtiss-Wright Corporation, Rolls Royce, Daimler-Benz.

**Outcome 5**

Describe the development of the aircraft into a major transport mode post-World War II.

**Performance criteria**

5.1 The use of World War II surplus pilots and aircraft for the establishment of airliners, airlines and routes globally is described.

Range over supply of pilots and aircraft, major and minor route structure.

5.2 The role of the helicopter in civil aviation is described.

Range capabilities, roles.

5.3 The use of amphibious aircraft to open air routes without landing fields is described.

Range flight requirements, routes.

**Outcome 6**

Describe the development of military and civil jet aircraft.

**Performance criteria**

6.1 The milestones in the development of jet powered aircraft are described.

Range may include – Hans von Ohain, ME 262, Sir Frank Whittle, breaking the sound barrier, passenger capacity, vertical take-off and landing (VTOL) capability, SR-71.

6.2 The milestones in the development of military jet aircraft and their roles are described.

Range may include but is not limited to – air-to-air combat, bombing, air-to-air refuelling.

6.3 The developments in European and American jet aircraft for commercial aviation use are described.

Range may include but is not limited to – passenger carrying capability, range, speed, comfort; two examples of European and American commercial jet aircraft.

**Outcome 7**

Describe current developments in the civil aviation industry.

**Performance criteria**

7.1 Developments in the civil aviation industry are described.

Range may include but is not limited to – advanced airport infrastructures, security, developments by Airbus and Boeing.

7.2 Potential developments in terms of space flight are described.

Range may include but is not limited to – commercial space flight, advances in space tourism, space exploration.

7.3 Developments in sport aviation are described.

Range hang gliders, powered or unpowered gliders, microlights in New Zealand, home built aircraft.

<b>Planned review date</b>	31 December 2025
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	16 December 2003	31 December 2020
Review	2	12 February 2010	31 December 2020
Review	3	26 April 2018	N/A
Rollover and Revision	4	25 May 2023	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0028
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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### Comments on this unit standard

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