### ——— Adventure Skills Ngā Pūkenga Mātātoa



Air Activities Ngā Mahi i te Rangi



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# **AIR ACTIVITIES**

### Ngā Mahi i te Rangi

### HOW TO USE THE COMPETENCY STATEMENTS AND SUPPORTING INFORMATION

Me Pēhea te Whakamahi i ngā Tauākī Matatau me ngā Mōhiotanga Tautoko

These competency statements and supporting information are designed to help you navigate exactly what you need to know to achieve any level of this skill. How you go about learning this is entirely up to you! There will be a bank of further resources on Mahi Tahi, or you might want to ask someone with expertise to come along and teach you.

Remember to Plan, Do, and Review all activities you undertake while completing your Adventure Skills!

#### **ASSESSMENT**

Te Aromatawai

Assessment of competencies can be done by a number of people:

- A youth member who has achieved the skill at least two more Levels above you
- An adult who has relevant skills or qualifications in the area.

Most Kaiārahi should be able to assess the earlier levels of most skills, however at some of the higher levels you may need to talk to an outside assessor with a formal qualification.

#### **KAITIAKITANGA**

Kaitiakitanga is the understanding that we are a part of the natural world, not separate from it, and it is our responsibility to act as guardians of our environment.

As Scouts, it is important that we always act as conscientious kaitiaki of our land, air, and water. All activities that we undertake should always consider their environmental impact, and adhere to the principles of Leave No Trace.



#### **RISK MANAGEMENT AND HEALTH AND SAFETY**

Te Whakahaere Mōrea, te Hauora me te Haumaru

When participating in adventurous activities it is vital that all appropriate safety measures are taken into account.

Before completing an adventurous activity you must ensure:

- The appropriate risk assessments have been completed, submitted, and approved in Mahi Tahi
- The activity is within the capacity of all participants (physical, mental, social, skills, etc.)
- All participants are aware of and have been age appropriately involved in the development of any safety measures
- The person in charge is appropriately competent and current in the material they will be teaching or leading
- All gear and safety equipment is serviceable and fit for purpose.

#### **ACCESSIBILITY**

Urutanga

All Scouts are different and have different needs and abilities, which is why this skill is designed to be as accessible as possible to all members of Scouting. If you are worried that a skill is outside of your abilities, whether that be physical, mental, or financial, talk to your assessor about how you might be able to adapt it to suit your needs.

#### **CROSS-CREDITING BETWEEN ADVENTURE SKILLS**

Te Whakawhitinga Whiwhinga i Waenga i ngā Pūkenga Mātātoa

Several of the Adventure Skills competencies are important for more than one skill. When working towards competency in one skill, it is worth checking if you are also gaining competency in another skill. To help with this, competencies that are the same or similar across multiple skills are marked with the corresponding skills and competency statements.



### **Competency Statements**

#### Tauākī Matatau

#### **AIR ACTIVITIES**

Ngā Mahi i te Rangi



#### Level

1.1	I can stay safe while around and inside aircraft
1.2	I can identify the features of an airport from a model or picture
1.3	I can name a range of things that can fly
1.4	I can talk about pictures of different flying machines
1.5	I can make a paper aeroplane and demonstrate how it flies
1.6	I know where my closest airport is and have visited it



#### Level 2

2.1	l can act safely around an airfield or airport
2.2	I can identify ways different flying machines can fly
2.3	I can point out the 5 main parts of an aircraft
2.4	I can make a small parachute out of light material, a weight
	or toy, and string
2.5	I know where it would be safe to fly a kite
2.6	I can build a kite and fly it



#### Level 3

- 3.1 I know the main principles of Leave No Trace and why they are important to aviation
- 3.2 I know the difference between airside and landside

3.3	I know what the different areas of an airport do and can
	point them out on a model or picture
3.4	I understand the principles of lift, drag, thrust, and weight
3.5	I know how hot air balloons work and how they are controlled
3.6	I can discuss why communication is important to aircraft
3.7	I know what a callsign is, and know New Zealand's
	nationality marking
3.8	I know where and when to get a weather forecast
3.9	I can help others learn about aviation
Level	4
4.1	I know the safety rules around airfields
4.2	I know the safety, legal, and privacy related regulations
	for flying drones in my area
43	Lunderstand the effects my air activities can have on

I understand what an aerofoil is and how it produces lift

Using a model, I can explain how an aeroplane climbs,

I know what Air Traffic Control is and understand the

differences between controlled and uncontrolled airspace

the environment

descends, and turns

4.4

4.5

4.6 4.7

4.8 4.9

4.10

4.11

I can build a model hot air balloon

I know the control surfaces of an aircraft

I know what stalling is and why it occurs

I am familiar with basic aircraft navigation

I know the phonetic alphabet



#### Level 5

5.1	I understand what FOD is, and why it is dangerous
5.2	I know what a pre-flight check is, and some of the important
	things to look for during one
5.3	I can identify different aircraft types from their features
5.4	I can identify some of the main aircraft instruments
5.5	I can identify the main components of at least 2 of the
	following: piston engine, gas turbine engine, jet engine, rocket
5.6	I can identify the main components of a drone
5.7	I have built and launched a water rocket
5.8	I understand how the weather affects air activities
5.9	I understand how wind can affect navigation
5.10	I have visited an airfield, control tower, or other aviation space
	and talked to company who works there about their ich



#### Level 6

- 6.1 I know how and when to complete the appropriate safety assessments for aviation activities, and who I need to share them with
- 6.2 I know what human factors are, and can explain the I'M SAFE model
- 6.3 I know how aircraft pressure instruments (such as altimeters and air speed indicators) work
- 6.4 I can discuss basic aerodynamic principles and how they affect lift
- 6.5 I know the difference between ground and air speed
- 6.6 I know how wind is used during take-off and landing
- 6.7 I know some of the basic radio protocols used in Air Traffic Control

6.8	I can obtain a local forecast for an air activity
6.9	I can discuss the ways different types of clouds are formed
	and can name the dangers of flying into clouds
6.10	I can discuss aircraft navigation
6.11	I can read a Visual Navigation Chart (VNC) and an
	Aerodrome Chart (from AIPNZ)



#### Level 7

<i>7</i> .1	I am familiar with the Scouts Aotearoa Management Procedures
	for flying activities
7.2	I know where to find resources on safety information for my air activities
7.3	I know what an Emergency Locator Transmitter (ELT) is and
	how it operates
7.4	I know the basic principles of a piston engine, including the
	four-stroke cycle
7.5	I know how a jet engine works
7.6	I understand the electrical systems of an aircraft and
	their functions
7.7	I can discuss the function of fuel and oil systems
7.8	I am familiar with aircraft documentation, including the
	aircraft flight manual, pilot's operating manual, airworthiness
	certificate, and aircraft technical log
7.9	I can complete fuel and oil checks, and understand why it is
	important to check for water in fuel
7.10	I can interpret meteorological reports including METAR, TAF,
	and ATIS
<i>7</i> .11	I have a basic understanding of the airspace around my

local aerodrome

- 7.12 Using a VNC, I can identify local landmarks and use them to remain oriented to the airfield
- 7.13 I have been for a familiarisation flight in a small aircraft or glider



#### Level 8

8.1	I can carry out a full pre-flight inspection
8.2	I am familiar with the pre-flight checks necessary for my chosen aircraft
8.3	I am familiar with the ground procedures at my local airfield and can safely taxi
8.4	l can takeoff under normal conditions
8.5	I can climb, descend, turn, and fly at straight and level in an aircraft
8.6	I can park and picket an aircraft
8.7	I can correctly log flights in a pilot's logbook
8.8	l can interpret aircraft marshalling signals
8.9	I am familiar with an Air Traffic Control (ATC) or
	Flight Information Service (FIS) tower's operations
8.10	I am familiar with light signals and can explain when they might be used
8.11	I can effectively communicate using the correct protocols
	with my local tower and other aircraft
8.12	I understand what a flight plan is, and the different types of flight plans



#### Level 9

9.1	I know the procedures for common emergencies that may
	occur while flying in the circuit
9.2	I understand how stalling occurs, and how to recognise and
	recover from it
9.3	I know when and how to complete a go-round
9.4	I am familiar with all the normal checks for my chosen aircraft
9.5	I can safely land an aircraft
9.6	I know the procedure for flying circuits at my local airfield
9.7	I have a sound understanding of meteorology and its
	application in aviation
9.8	I have achieved a solo, or simulated solo flight

# **Supporting Information**Mōhiotanga Tautoko



#### 1.1 I can stay safe while around and inside aircraft

Scout shows an awareness of the dangers of an airfield and aircraft.

Scout is aware that they should follow instructions carefully and be aware of their surroundings at all times.

# 1.2 I can identify the features of an airport from a model or picture

Scout can discuss the main features of an airport with reference to a picture or map.

Scout can point out the runway, terminal, control tower, etc.

#### 1.3 I can name a range of things that can fly

Scout can discuss what they know about things that fly. This should include both living and non-living things. This could be presented using drawings or other media.

#### 1.4 I can talk about pictures of different flying machines

Scout can show pictures of different flying machines and talk about what makes each one different.

### 1.5 I can make a paper aeroplane and demonstrate how it flies

Scout can build a paper plane and fly it.

Scout can make changes to the design of their plane and talk about how this affects its flight path.

#### 1.6 I know where my closest airport is and have visited it

Scout has taken a trip to visit an airport or airfield.



#### Level 2

#### 2.1 I can act safely around an airfield or airport

Scout understands the difference between restricted areas of an airfield or airport and safe public areas.

Scouts can recognise the signs and markings which indicate the boundaries between these areas.

#### 2.2 I can identify ways different flying machines can fly

Scout can identify a variety of flying machines and talk about their different flying mechanisms.

#### 2.3 I can point out the 5 main parts of an aircraft

Scout can point out the cabin, wing, tail, wheels, and engine of a plane from a diagram, picture, or real aeroplane.

#### 2.4 I can make a small parachute out of light material, a weight or toy, and string

Scout can make a small parachute and drop it from a height to see how it falls.

Scout can experiment with different parachutes to see which one falls slowest and fastest and talk about why they think this might be.

#### 2.5 I know where it would be safe to fly a kite

Scout can identify places that could be suitable for kite flying.

Scout can explain what features might make an area safe or unsafe for kite flying.

#### 2.6 I can build a kite and fly it

Scout can show a kite that they have made and demonstrate how it flies.

Scout can talk about the different parts of their kite and why they were made out of the materials chosen.



#### Level 3

3.1 I know the main principles of Leave No Trace and why they are important to aviation

**4** 3.7

<u>1</u> 3.7

**3.1** 

**3.3** 

**1** 3.3

**₩** 3.1

Scout understands the importance of caring for their environment and can explain why waste is particularly dangerous around an airfield.

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Scout can identify that rubbish could get sucked into engines, block air intakes, damage moving parts like a propeller or rotor, or otherwise damage aircraft.

Scout has an awareness that food waste might attract birds, and can explain why this might be dangerous.

#### 3.2 I know the difference between airside and landside

Scout can explain how a modern airport is laid out.

Scout understands the difference between airside and landside and the necessary precautions and procedures that are required in each area.

# 3.3 I know what the different areas of an airport do and can point them out on a model or picture

Scout can explain the role of the different areas of an airport, including terminal, runway, taxiway, control tower, and holding points.

Scout can identify these features on a model or picture.

#### 3.4 I understand the principles of lift, drag, thrust, and weight

Scout can explain the four main forces that act on an in-flight aeroplane and describe the effects they have.

### 3.5 I know how hot air balloons work and how they are controlled

Scout can identify the key components of a hot air balloon and explain how they work.

This can be done by the use of a model.

#### 3.6 I can discuss why communication is important to aircraft

Scout can explain why communication is important in aviation.

Scout is aware that Air Traffic Control, pilot position reports, and flight plans are used to help in the safety of aircraft on the ground and in the air.

# 3.7 I know what a callsign is, and know New Zealand's nationality marking

Scout is aware that all aircraft have individual callsigns and can identify the prefix that all New Zealand aircraft will have (ZK- for civil, NZ- for military).

#### 3.8 I know where and when to get a weather forecast

Scout can access information from the appropriate weather forecasters in their area.

Scout can explain how and when it is best to access this information.

#### 3.9 I can help others learn about aviation

Scout has helped a less experienced person learn about an aspect of their Air Activities skill and shows a willingness to share their expertise with others.



#### 4.1 I know the safety rules around airfields

Scout understands the importance of safety around an airfield and can explain the importance of the following:

- Entering airside areas only with permission
- Always keeping a good lookout
- Knowing the safe routes for getting around the airfield
- Knowing how to recognise live or operating aircraft
- Understanding the dangers of propellers, rotors, and jet engines, and the danger areas associated with each.

## 4.2 I know the safety, legal, and privacy related regulations for flying drones in my area

Scout can explain reasons why they might not be able to fly drones in certain areas, including areas where it might be dangerous to fly, culturally inappropriate, or a breach of privacy.

Scout is familiar with the current regulations on drones in their area and can discuss why these regulations are important. Scout is familiar with <u>airshare.co.nz</u> and CAA drone regulations, including Part 101.

### 4.3 I understand the effects my air activities can have on the environment

Scout can discuss the effects of air activities on carbon emissions and environmental concerns.

Scout can identify ways to reduce these effects.

#### 4.4 I can build a model hot air balloon

Scout has participated in the building of a flyable model hot air balloon.

Scout can explain the materials used in the construction process and how it is inflated for flight.

Scout can ensure that environmental considerations are accounted for in the creation and launching of model hot air balloons.

#### 4.5 I understand what an aerofoil is and how it produces lift

Scout can explain the basic principles behind the production of lift from an aerofoil.

#### 4.6 I know the control surfaces of an aircraft

Scout can identify the control surfaces (ailerons, elevator, rudder) on a diagram and describe how they move to control the path of flight of the aircraft.

# 4.7 Using a model, I can explain how an aeroplane climbs, descends, and turns

Scout can use a model of any kind to demonstrate their understanding of how an aeroplane manoeuvres whilst in flight.

#### 4.8 I know what stalling is and why it occurs

Scout can explain what stalling is and the causes of it.

Scout can refer to their knowledge of airspeed, angle of attack, and lift while explaining this, and explain how an aeroplane recovers from a stall.

#### 4.9 I know the phonetic alphabet

Scout can explain why the phonetic alphabet is used in aviation communication and is able to recite, and use it to spell relevant words.

## 4.10 I know what Air Traffic Control is and understand the differences between controlled and uncontrolled airspace

Scout can explain the role that air traffic control plays in keeping aviation safe.

Scout can discuss the differences between controlled and uncontrolled airspace.

#### 4.11 I am familiar with basic aircraft navigation

Scout is familiar with basic airspace maps and symbols and can explain how to use these with a compass to navigate whilst in the air.



#### 5.1 I understand what FOD is, and why it is dangerous

Scout can explain what FOD stands for (Foreign Object Damage or Debris) and how it applies to aircraft.

Scout can give examples such as debris on the runway, tyre rubber, and birds in flight.

Scout can identify hazards that might occur at airfields that are near water and hazards that might occur from aircraft parts becoming dislodged inside and outside the aircraft.

Scout can discuss ways to reduce these hazards, what to do if they occur, and how to report them.

### 5.2 I know what a pre-flight check is, and some of the important things to look for during one

Scout can explain the importance of checking an aircraft before every flight.

Scout can discuss some of the important things to look for while carrying out a pre-flight check.

#### 5.3 I can identify different aircraft types from their features

Scout is familiar with a range of at least 15 commercial aviation or training aircraft and is able to identify them.

#### 5.4 I can identify some of the main aircraft instruments

Scout can identify the key aircraft instruments and avionic and electrical systems and explain what they are used for.

This should include the following instruments: airspeed indicator, artificial horizon, altitude indicator, vertical speed indicator, compass, turn and bank indicator, and engine RPM. Avionic and electrical systems should include: alternator, battery switch, magneto switch(es), starter switch, transponder, and radios.

# 5.5 I can identify the main components of at least 2 of the following: piston engine, gas turbine engine, jet engine, rocket

Scout has a basic understanding of how the various engines work and is able to identify their key components.

#### 5.6 I can identify the main components of a drone

Scout is familiar with the key components of a drone and can explain their functions.

This should include the frame, power system, control system, and propulsion method.

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#### 5.7 I have built and launched a water rocket

Scout has participated in the building and launch of a water rocket with a team.

Scout can discuss the key components of the rocket, how they work, and safety considerations.

#### 5.8 I understand how the weather affects air activities

Scout can discuss the effects of wind speed, cloud formations, including towering cumulus (TCUs) and cumulonimbus (CBs), icy conditions, turbulence, and thunder and lightning on flying activities.

Scout can identify some of the safety measures that should be taken in various weather situations.

#### 5.9 I understand how wind can affect navigation

Scout can explain the effects of wind on track and groundspeed and how to compensate for this.

# 5.10 I have visited an airfield, control tower, or other aviation space and talked to someone who works there about their job

Scout has spoken to a professional about an aspect of the aviation industry to further their understanding.



#### Level 6

6.1 6.1 6.1 6.1 6.1 I know how and when to complete the appropriate safety assessments for aviation activities, and who I need to share them with

6.1 6.1 Scout understands the importance of communicating their plans to others and assessing the risk of any activities they undertake.

Scout has an understanding of any qualifications that must be present during their activities.

Scout is familiar with the appropriate paperwork required to complete an aviation activity, and is able to complete and communicate these within the appropriate time frame.

### 6.2 I know what human factors are, and can explain the I'M SAFE model

Scout can explain why human error is a key factor to monitor in aviation safety and what to look for when accounting for this.

Scout can explain the key principles of the I'M SAFE model: illness, medication, stress, alcohol, fatigue, eating.

# 6.3 I know how aircraft pressure instruments (such as altimeters and air speed indicators) work

Scout can explain how aircraft pressure instruments work and factors that could influence their reliability.

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## 6.4 I can discuss basic aerodynamic principles and how they affect lift

Scout understands the terms angle of attack, cord, lift, drag, weight, and centre of pressure and can discuss how they affect lift.

#### 6.5 I know the difference between ground and air speed

Scout can explain the relationship between ground and air speed, and how they relate to navigation when wind velocity is taken into account.

#### 6.6 I know how wind is used during take-off and landing

Scout can discuss how a plane takes off and lands, and how airspeed over the wings provides lift.

### 6.7 I know some of the basic radio protocols used in Air Traffic Control

Scout can prepare a list of personal and group gear for an overnight ride, including all required cooking equipment, emergency equipment, and appropriate item and food quantities.

#### 6.8 I can obtain a local forecast for an air activity

Scout knows how to get appropriate weather forecasts for flying and discuss the key points of a forecast that need to be noted and observed.

# 6.9 I can discuss the ways different types of clouds are formed and can name the dangers of flying into clouds

Scout can discuss the formation of clouds and their relation to geographical features.

Scout can identify a variety of different clouds, and is able to explain their significance.

Scout can name the key dangers of clouds and explain how to identify their warning signs.

#### 6.10 I can discuss aircraft navigation

Scout can discuss how a pilot navigates whilst flying.

Scout has a basic understanding of compass direction, air to ground observation, airspeed versus groundspeed, drift, and dead reckoning navigation compensating for wind velocity.

## 6.11 I can read a Visual Navigation Chart (VNC) and an Aerodrome Chart (from AIPNZ)

Scout is able to identify various types of charts and the signs and symbols used on each.

Scout can discuss the differences between air charts and land based maps such as a topographical Topo-50 map.



## 7.1 I am familiar with the Scouts Aotearoa Management Procedures for flying activities

Scout knows where to find current management procedures for flying activities, and understands why they are necessary.

# 7.2 I know where to find resources on safety information for my air activities

Scout is familiar with where to find safety resources and information, such as GAPs books.

# 7.3 I know what an Emergency Locator Transmitter (ELT) is and how it operates

Scout can discuss the purpose and function of an ELT.

Scout knows the importance of checking that the ELT is not operating after completion of each flight.

# 7.4 I know the basic principles of a piston engine, including the four-stroke cycle

Scout understands how a piston engine works and is able to describe the operation of the four-stroke cycle (intake, compression, power, exhaust).

#### 7.5 I know how a jet engine works

Scout can explain the basic principles of how a jet engine produces thrust.

### 7.6 I understand the electrical systems of an aircraft and their functions

Scout can explain the key components of an aircraft electrical system and what they do.

This should include discussion of magnetos, spark plugs, the master switch, battery, alternator, and ammeter.

#### 7.7 I can discuss the function of fuel and oil systems

Scout can explain the fuel system of a plane, including discussing the differences between fuel pumps and gravity feeds, usable fuel, fuel cocks, fuel types, and fuel consumption.

Scout can explain the oil system of a plane, including discussion of oil pressure, and the purpose of oil (cooling, cleaning, lubrication).

#### 7.8 I am familiar with aircraft documentation, including the aircraft flight manual, pilot's operating manual, airworthiness certificate, and aircraft technical log

Scout understands the importance of correct aircraft documentation and knows how to check it is in order.

## 7.9 I can complete fuel and oil checks, and understand why it is important to check for water in fuel

Scout knows what to look for in a fuel and oil check.

Scout can explain the dangers of water in fuel and how to recognise it.

### 7.10 I can interpret meteorological reports including METAR, TAF, and ATIS

Scout can interpret a METAR, TAF, and ATIS and understands the impact of this information on their flight plans.

# 7.11 I have a basic understanding of the airspace around my local aerodrome

Scout is familiar with their local airspace and can discuss its main features.

This should include knowledge of the circuit directions and altitudes, runways, types of airspace (controlled, uncontrolled, special use), regular operators, and adjacent aerodromes.

### 7.12 Using a VNC, I can identify local landmarks and use them to remain oriented to the airfield

Scout can recognise local landmarks from the air and use these to help orientate themselves.

# 7.13 I have been for a familiarisation flight in a small aircraft or glider

Scout has taken a familiarisation flight with an instructor.



#### Level 8

#### 8.1 I can carry out a full pre-flight inspection

Scout can demonstrate a full pre-flight inspection of an aircraft.

### 8.2 I am familiar with the pre-flight checks necessary for my chosen aircraft

Scout is able to complete the pre-flight checks for their aircraft, and can explain what they should be looking for with each check.

This should include before engine start, taxi, engine run up, pre-takeoff, line up checks, and takeoff checks.

## 8.3 I am familiar with the ground procedures at my local airfield and can safely taxi

Scout is able to describe the ground procedures at their local airfield and is able to taxi an aircraft in a safe way.

#### 8.4 I can takeoff under normal conditions

Scout can demonstrate a takeoff procedure under the guidance of a flight instructor.

### 8.5 I can climb, descend, turn, and fly at straight and level in an aircraft

Scout can demonstrate how to climb, descend, turn, and fly at straight and level under the guidance of a flight instructor.

Scout can discuss the principles of flight behind these manoeuvres.

#### 8.6 I can park and picket an aircraft

Scout can demonstrate the correct procedures for parking and picketing their aircraft.

Scout can explain the dangers of incorrect parking and picketing, especially in windy conditions.

#### 8.7 I can correctly log flights in a pilot's logbook

Scout is able to correctly record their flight progress in a pilot's logbook.

#### 8.8 I can interpret aircraft marshalling signals

Scout is familiar with basic marshalling signals and is able to appropriately and safely follow them.

## 8.9 I am familiar with an Air Traffic Control (ATC) or Flight Information Service (FIS) tower's operations

Scout has visited their local ATC or FIS tower (or remote tower) and has discussed the principles of Air Traffic Control including strip usage, radio calls, and local operating procedures with the staff there.

# 8.10 I am familiar with light signals and can explain when they might be used

Scout can give examples of light signals and their meanings in different situations in the air and on the ground.

Scout knows when and where to look for light signals.

## 8.11 I can effectively communicate using the correct protocols with my local tower and other aircraft

Scout can demonstrate correct radio usage and communication procedures.

# 8.12 I understand what a flight plan is, and the different types of flight plans

Scout can explain the importance of a flight plan and is able to complete one.

Scout can explain the difference between a VFR/IFR flight plan, SAR plan, VFR flight notification (online using IFIS), and local (informal) flight plan.



# 9.1 I know the procedures for common emergencies that may occur while flying in the circuit

Scout is familiar with the common emergencies that might occur while flying in the circuit and is able to demonstrate appropriate responses to these in a simulated environment. This should include: engine failure after takeoff, glide landing, and flapless landing.

### 9.2 I understand how stalling occurs, and how to recognise and recover from it

Scout can explain the principles behind stalling an aircraft and demonstrate a stall recovery under the guidance of a flight instructor.

#### 9.3 I know when and how to complete a go-round

Scout can explain reasons a go-round might be necessary (runway obstruction, unsuitable approach, etc.).

Scout can demonstrate a go-round procedure.

### 9.4 I am familiar with all the normal checks for my chosen aircraft

Scout is familiar with all of the normal checks for their chosen aircraft and is able to explain what they are looking for with each one

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#### 9.5 I can safely land an aircraft

Scout is able to land a light aircraft safely.

Scout can discuss factors that might affect their landing length, such as surface type, airspeed, use of flaps, slope, and wind velocity.

Scout can discuss the principles of wind velocity and descent angle in landing, and explain why flaps are used.

### 9.6 I know the procedure for flying circuits at my local airfield

Scout is familiar with the circuit at their local airfield and is able to demonstrate their flying skills in a circuit.

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