

Atlantic **AirVenture**

AVIATION EDUCATION FLIGHT SIMULATION - VISITOR CENTRE
SHANNON CO CLARE
www.atlanticairventure.com

**Air Activities Adventure Skill
aviation knowledge & practical activity module**

About Atlantic AirVenture

Most people have a passing interest in flight and some have a passionate interest in flight! Atlantic AirVenture Aviation Centre in Shannon is *the* place to indulge your passion and fuel the curiosity for flight with a mix of past and present aviation wonders and a totally 'hands on' experience!

Our aviation museum is open to groups and individuals all year round.

Learn about Shannon Airport's unique history and contribution to global aviation.

See the timeless voices of Irish Aviation, an aural history of some of the characters that developed and pioneered Irish Aviation.

Learn about Shannon Airport's unique history. See exhibits including real Cockpits, Landing Gear, Jet Engines and Instruments. Step back in time to view historical Celestial Navigation instruments used in 1940's, and a great collection of memorabilia and artifacts.

The only place of its kind in Ireland, Atlantic AirVenture is a unique place for adults and kids to learn about the world of flight in a pure aviation environment. Our staff and volunteers all share a desire to pass their knowledge on in the hopes of inspiring another generation of aviators. Among the programmes we offer are Primary School Tours, TY Aviation Careers Field Trips and Summer ACE Aviation Camps. Throughout the year we host events for Engineers Week, Heritage Week and other themes. Our education programmes are delivered by qualified, licenced pilots, instructors and engineers in a 'hands on minds on' way that is both fun and educational.

Our flight simulation centre includes a B 737 NG flight simulator. Constructed using the cockpit section of a real aircraft which was in service for over 30 years, the flight deck features many original Boeing parts such as the control columns and throttle which add to the incredible realism of this unforgettable experience. Visitors can have a first virtual flying lesson on a typical training aircraft simulator with a qualified pilot, all without leaving the ground. We use these simulators for groups or individuals we can accommodate up to 16 persons per session using 8 dual seat trainers.

Participants who attend Atlantic AirVenture for a practical and knowledge module for Air Activities Adventure Skills Badges will upon satisfactory completion of each module will receive a certificate from Atlantic AirVenture. An unbroken half day module is recommended to cover the content in the following modules, this can be divided into two 2 hr sessions if needed . On departure Scout leaders will be provided with an info pack with additional workbooks and templates to continue their skills requirements at home and with the scout group. However we are flexible and will do our best to accommodate your particular needs.

If you have any questions please feel free to call Atlantic AirVenture in Shannon on 061 363687 or visit www.atlanticairventure.com



Air Activities Adventure Skills Badge.

Air Activities Adventure skills Stage 1, 2 & 3

This module is specifically aimed at fulfilling much of the knowledge and skills requirements for stages 1, 2 and 3 of the AirActivities Adventure Skills Badge using classroom tutorials and practical hands on flight simulation activities designed to be fun and educational.

Topics covered include:

Learn what inspired man to fly and see the first attempts at flight.
Find out about the first Powered flight by the Wright Brothers and see the original film of the day.
Learn how an airfield operates, how aircraft are handled, and how to avoid dangers.
Learn the phonetic alphabet, find out how and why it is used in aviation communications.
Find out why communication is vital between aircraft and air traffic control.
Hear about ATC communications from an AirTraffic Controller*

Discover how aircraft are flown and controlled.
Learn the parts of the airplane and the control surfaces.
Find out what the flight instruments are and what information they give to the pilot and how they use it.
Test the theory during a simulated flying lesson as Pilot and First Officer teams.
Evaluation using questions and answers worksheet quiz.

2 hr Module Min €15 per person
Minimum Group size 10
Age 6+

Half Day Module €28 per person
Groups min size 20
Age 6 +

* subject to availability





Competency Statements Stage 1

We provide	Workbook provided	Scout Homework
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Competency Statements Stage 2

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Stage 2



Competency Statements Stage 3

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Stage 3

Air Activities Adventure Skills 4 & 5 Practical Module.

This module is ideal to build on knowledge and practical experience gained during earlier stages 1, 2 & 3 .Topics are covered which will assist the scout to fulfilling much of the knowledge and skills requirements for stages 4 and 5 of the AirActivities Adventure Skills Badge A completion certificate will be awarded at the end of the module to all participants.

Topics Include:

Discover Aerodynamics, the facts and rules that govern flight

Find out how Lift is created and how the 4 forces of flight Lift, Weight, Thrust and Drag affect flight

Hear from an aircraft maintenance engineer how aircraft can be damaged and how they are maintained and repaired*

Classroom lesson on parts of the aircraft, flight controls & aircraft Instruments.

Learn why aircraft startup procedures and checklists are important.

Flight Simulator Lesson1 - We put the theory to the test during a lesson on the flight controls, pilots will learn how they are used to control the aircraft.

Learn what a stall is and how to recover.

Learn about the earths atmosphere and composition.

Find out about Weather and how it affects Flight.

Flight Simulator Lesson 2 - Lets find out how the wind and weather affects a short cross country flight.

Try a bad visibility take off and landing.

Evaluation using questions and answers worksheet quiz.

2 hr Module €15 per person

Minimum Group size 10

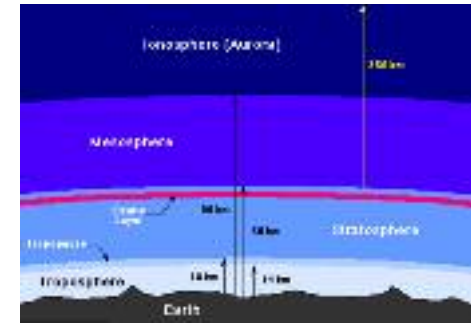
Age 9+

Half Day Module €28 per person

Groups min size 20

Age 9 +

***subject to availability**





Competency Statements Stage 4

We provide	Workbook provided	Scout Homework
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I know the rule relating to airfields

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I understand how a wing derives lift.

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I can discuss with my Scouter Lift, Weight Thrust and Drag

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I know the control surfaces of an aircraft.

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I can explain how an aero plane climbs, dives and turns using a model.

•

I can explain the causes of stalling.

•

I know the logos of the various airlines.

•

I can build a Hot Air Balloon.

•

I have produced a project based on the Moon Landings.

•

I have taken part in a water rocket launch.

•

Competency Statements Stage 5

I understand what FOD is.

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I know how to approach an aircraft.

•

I know the signs that an aircraft is about to start an engine.

•

I know where the safe jet blast zones are on an aircraft.

•

I know how to identify different aircraft types from their features.

•

I understand how weather affects air activities

•

I can show a younger Scout how control surfaces work

•

I can build a scale model aircraft to a satisfactory standard from paper and balsa wood.

•

I can identify some aircraft instruments using a computer simulator, or other method.

•

I can show how to take off and fly through various weather conditions and land safely using a computer simulator, or other method.

•

I can discuss with my Scouter how the Earth's atmosphere affects air travel

•

I can build and launch a water rocket.

•

I have taken part in at least two air activities

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Stage 4

Stage 5



Air Activities Adventure Skills Stage 6.

This module is ideal to build on knowledge and practical experience gained during earlier stages 1 -5. Topics are covered which will assist the scout to fulfilling much of the knowledge and skills requirements for stage 6 of the AirActivities Adventure Skills Badge. Ideally revision and study of previous modules should be completed so that the participants are thoroughly prepared for stage 6. A completion certificate will be awarded to participants who satisfactorily complete the module.

Topics Included:

Types of Navigation VFR / IFR

Aerial Charts and Symbols

Flight Planning Find out what a flight plan is and how they are made using Dead Reckoning

What is Air Speed and how is it measured by the (ASI) Air speed Indicator.

What is Ground Speed and how does the wind affect it.

Aviation Weather- Cloud Types and Formation.

Forecasts , where to find them and how to read them.

VFR Simulated Flight Exercise Shannon to Kerry using a flight plan you have made.

Learn about Radio Navigation and how it works.

How does the earths atmosphere affect radio.

Practical Radio Navigation Exercise using Flight Simulators.

Complete an ILS landing in our B737 800 flight simulator*

Evaluation using questions and answers worksheet quiz.

Ages 12+

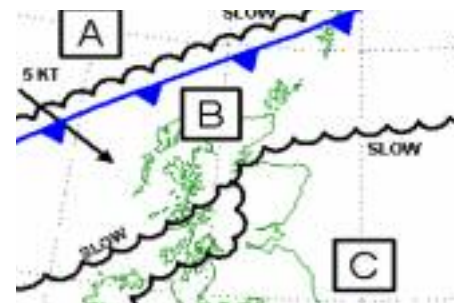
Half Day 4 hrs €28

*Half day with 737 landing €50

Min Group size 12

A minimum half day module is recommended to cover the content.

Individual lessons also available, reduced rates for scouts, enquire for details.





Competency Statements Stage 6

We provide
Workbook
provided

I can discuss aircraft navigation with my Scouter.

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I know the types of air maps and the conventional signs used on them.

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•

I can demonstrate how to obtain a local forecast for an air activity.

•

I can explain how wind speed and direction are measured and how weather can affect various air activities.

•

I can explain the difference between ground speed and air speed and how wind is used in takeoff and landing.

•

I can discuss with my Scouter how the Earth's atmosphere affects air travel.

•

I can understand three different ways in which clouds are formed.

•

I can show that I understand the basic 'T' instrument cluster.

•

I can handle a powered model aircraft during takeoff and fly through various weather conditions and land safely.

I can explain the workings of aircraft pressure instruments, for example an altimeter or air speed indicator.

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I can discuss how the Ionosphere affects communication.

•

I can navigate my patrol over a route using a GPS.

I have attended an Air Display.

I have participated in a themed 'Space Camp' or event with a group of Scouts.