



**ATLANTIC AIRVENTURE
AVIATION EDUCATION - FLIGHT SIMULATION
SHANNON**

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AIR ACTIVITIES BADGE



REQUIREMENTS

MODULES

- 1. Have a good knowledge of the rules relating to access to airfields**
- 2. Know the parts of an aircraft**
- 3. Know the control surfaces of an aircraft and how they work**
- 4. Identify 12 Aircraft in common use today from pictures or the internet
Choose 4 from each of the following categories**
 - a. Civil / Passenger Aircraft**
 - b. Military**
 - c. Light Aircraft**
- 5. Using a model glider you have made, trim it to perform the following manoeuvres**
 - a. Straight Glide**
 - b. Glide with a turn to the left**
 - c. Glide with a turn to the right**
 - d. Stall**
 - e. Dive**

MODULE 1

ACCESS TO AIRFIELDS

The first and most important thing to know about flying and aircraft is how to avoid the many dangers that exist. Make sure that you learn these safety rules and why they are important.

1. Keep off runways and well clear of all taxi ways and aprons unless you have permission to be on the active area and have a specific job to do. All personnel who are airside must wear high visibility clothing so they can be easily seen by aircraft.
2. Get permission before you enter an aircraft or an aircraft hangar.
3. If you have to get to the other side of an airfield, use the perimeter track
4. Keep Clear of engines starting up, or running, jets have a danger area of more than 5 metres in front and 100 metres behind
5. Never, ever touch the propellers of an aircraft.
6. If you have to approach an aircraft with the engines running, always do so from the side, **REMEMBER** that a spinning propeller is almost invisible. Always be on the lookout and never make any sudden moves in the vicinity of aircraft.
7. In gliding, keep well clear of all launching equipment and cables.
8. Treat all aircraft with respect.
9. No smoking is allowed and no naked flames, lighters and matches, should be anywhere near aircraft, hangars or refuelling points as aviation fuel is highly flammable.
10. If in doubt always ask, **NEVER** act unless you are sure.

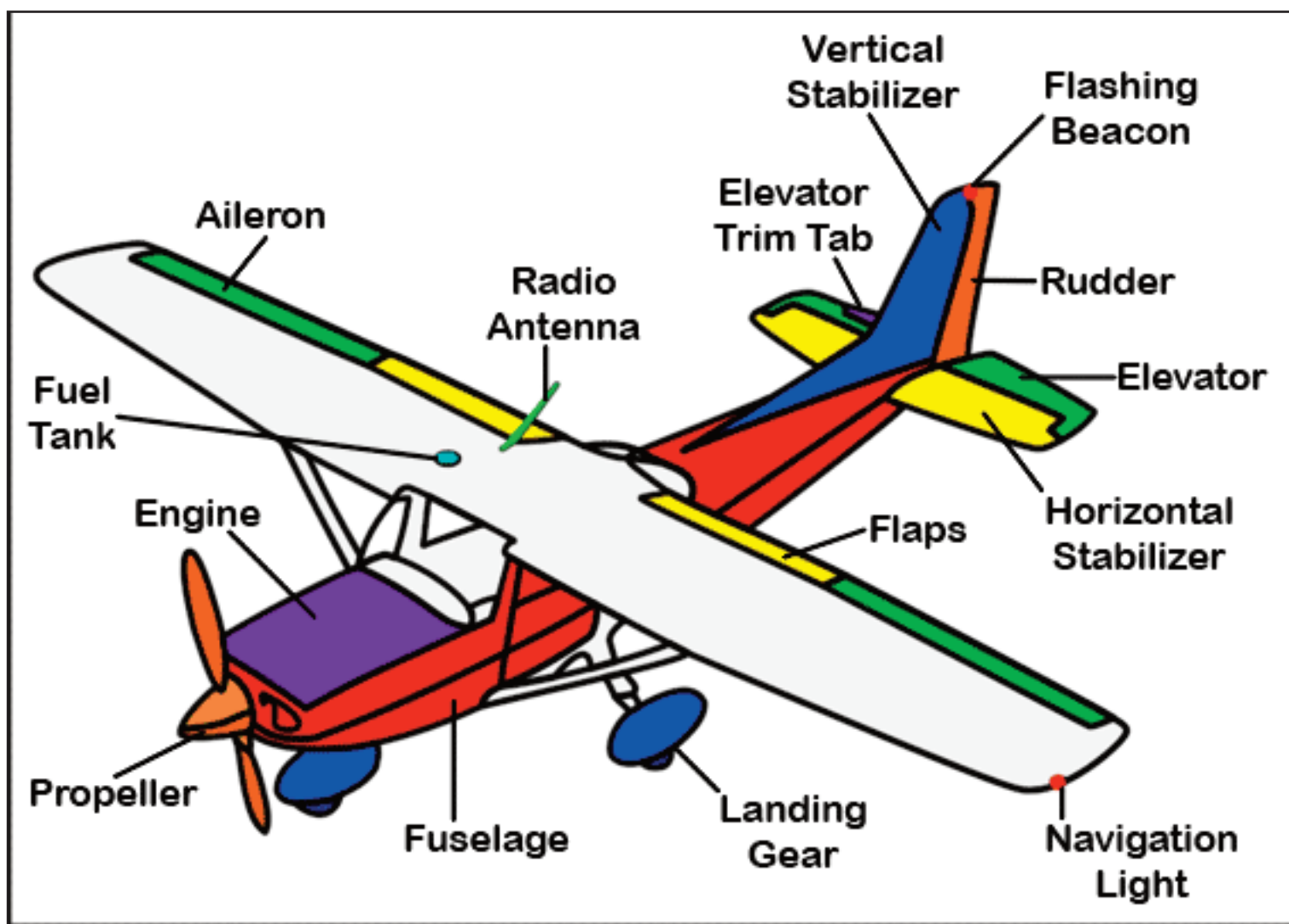


MODULE 2

PARTS OF THE AIRCRAFT

your task . . . to know the parts of an aircraft

use this sheet as a guide, and then draw your own aircraft
and label all the parts



Bring your pictures with you and be ready for a test!

PARTS OF THE AIRCRAFT

Aileron:

Movable control surfaces, usually mounted in the trailing edge of a wing adjacent to the wingtips, to control an aircraft's rolling movements.

Elevator: Movable control surface on the horizontal stabilizer of an aircraft that move up or down to make the aircraft climb or descend

Elevator Trim Tab: a small tab that helps to reduce pilot fatigue.

It is a small flap that, when air passes over it in flight, it deflects the elevator to the proper position so the pilot does not have to manually hold it there.

Rudder: moving parts on the vertical stabilizer that turn (yaw) the aircraft left or right

Vertical Stabilizer: aerofoils located on the tail of an aircraft that help maintain a straight, vertical path through the air

Engine: the part of an aircraft that provides power to move the aircraft through the air

Flaps: found on the wing closer to the fuselage than the ailerons.

They can be lowered to provide more lift at slower speeds so an airplane can take off .

On approach flaps are gradually lowered to provide increasing drag so the airplane can land at the slowest speed possible.

Flashing Beacon: flashing light on an aircraft that helps pilots see each other and helps to avoid mid-air collisions

Fuel Tank: the tank that holds fuel for the engine

Fuselage: main structural part that connects all other parts together

Horizontal Stabilizer: airfoils located on the tail of an aircraft that help maintain a straight, horizontal path through the air

Landing Gear: the wheels on an airplane so it can land and taxi

Navigation Light: lights that show an aircraft's location for other pilots.

The lights are coded to show an aircraft's port side (left side (red light) and starboard side (right green light) sides.

Propeller: two or more twisted blades (aerodynamically shaped) that pull an airplane forward as they turn Propeller Blades have the same shape as wing, They are attached to the engine crank shaft to provide forward motion.

Radio Antenna: allows pilots to keep in radio contact with each other, Air Traffic Control and ground handling .

MODULE 4

AIRCRAFT IDENTIFICATION

Identify 12 aircraft in common use today from pictures
Use the Internet for research and print out the following



Choose 4 Light Aircraft



Choose 4 Military Aircraft



Choose 4 Civil Aircraft

MODULE 5

Construct a Model Glider , this can be paper, card, balsa wood etc.

Trim the model to perform

- 1. A glide with a turn to the left**
- 2. Glide with a turn to the right**
- 3. Stall**
- 4. Dive**

