

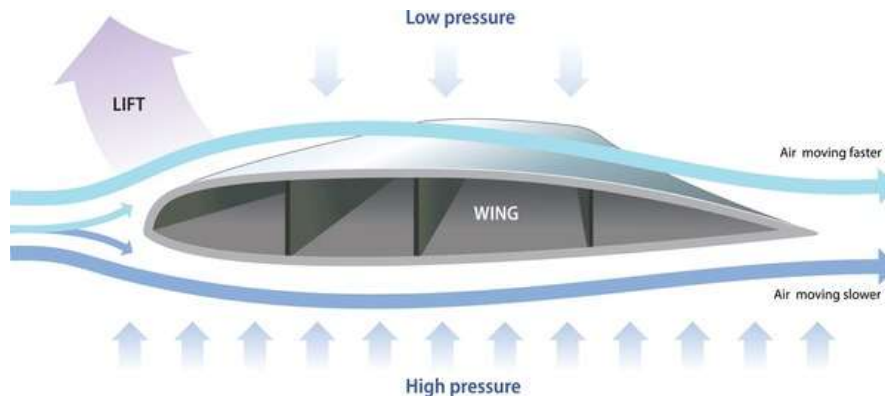


Club Website

<https://mgmfc.bmfa.club>



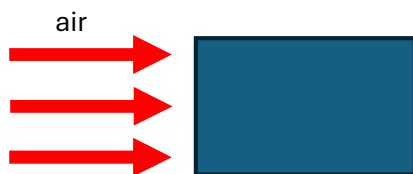
Flight relies on four, constant, interacting forces: **lift** (upward, from wings), **weight** (downward, gravity), **thrust** (forward, engine power), and **drag** (backward, air resistance). In steady, level flight, these forces are **balanced**: **LIFT = WEIGHT** and **THRUST = DRAG**.



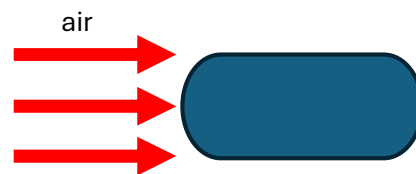
The curved shape of the wing accelerates the air over the top causing a **low pressure** for form above the wing

The flat shape at the bottom of the wing as slower moving air with a **higher pressure**

The higher pressure forces the wing upwards = **LIFT**



High DRAG boxy shape



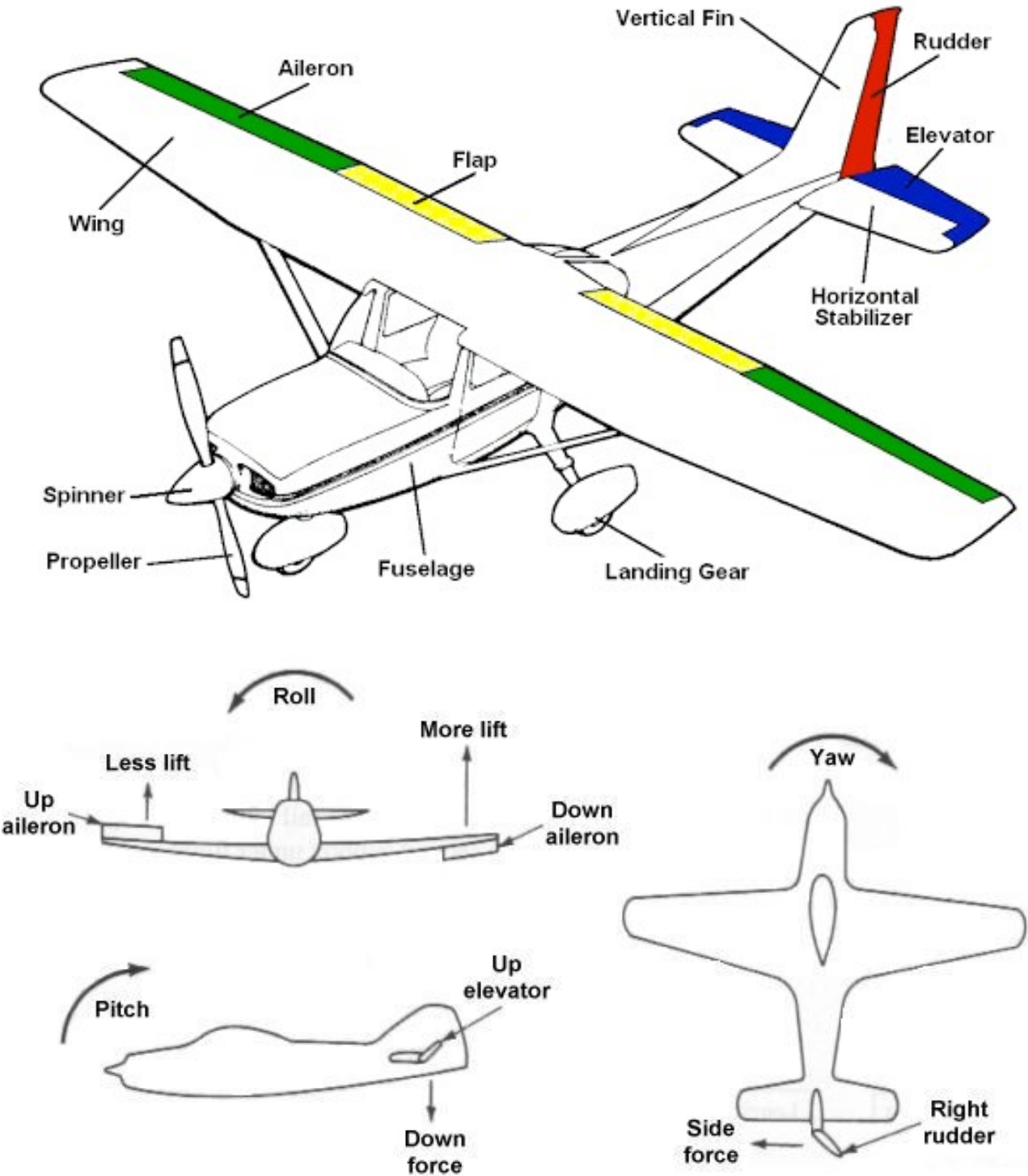
Low DRAG smooth shape

A flat boxy shape slows you down in the air, but a smooth pointy shape helps the plane slip through the air

Low DRAG = Less THRUST required to push the plane through the air and lower fuel usage.

Aircraft flight controls consist of primary surfaces (ailerons, elevator, rudder) for manoeuvring and secondary surfaces (flaps, slats, spoilers) for lift/drag management, allowing control over roll, pitch, and yaw.

Primary controls use the yoke/stick and pedals to manage 3D movement
Secondary controls manage speed and lift during take-off and landing.



Movement	Axis	Airplane Part Used	Resulting Action
Pitch	Lateral (Wing-to-Wing)	Elevators	Nose up/down (Climb/Descend)
Roll	Longitudinal (Nose-to-Tail)	Ailerons	Wings bank left/right (Turns)
Yaw	Vertical (Top-to-Bottom)	Rudder	Nose swings left/right