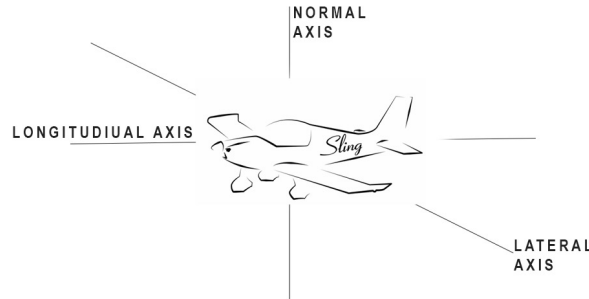


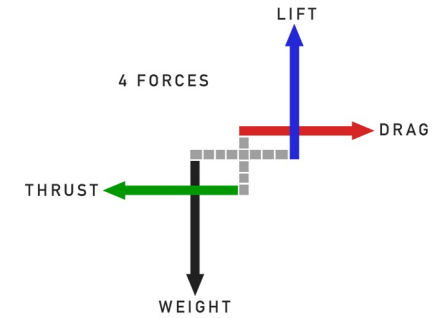
EFFECTS OF CONTROLS

AIM: TO OPERATE THE PRIMARY CONTROL SURFACES AND OBSERVE THE PRIMARY, SECONDARY AND FURTHER EFFECTS THEY HAVE ON THE AIRCRAFT

AIRMANSHIP: "I HAVE CONTROL"
"YOU HAVE CONTROL"



LIFT: LIFT IS A FORCE GENERATED BY AN OBJECT MOVING THROUGH A FLUID

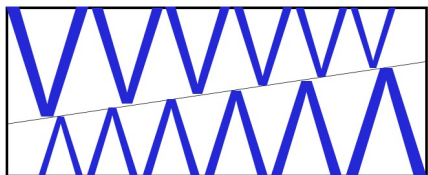


$$\text{LIFT} = C_L \frac{1}{2} \rho V^2 S$$

CONTROL SURFACES	PRIMARY EFFECT	SECONDARY OR FURTHER EFFECT
Elevator	Pitch Up Pitch Down	Fast / Slow
Aileron	Roll	Slip / Yaw
Rudder	Yaw	Skid / Roll

	BELOW CRUISE	CRUISE	ABOVE CRUISE
AIRFLOW	Less Firm Less Responsive SLOPPY	Firm Responsive	More Firm More Responsive
POWER AND PROPELLER	Nose pitches Down Yaws Right	Aircraft flies Straight	Nose pitches Up Yaws Left

TRADE OFF BOX:



ANCILLORY CONTROLS:

TRIM: Relieves Control Column Pressure

FLAP: Lift generating device

ENGINE

Fuel Injected

Carburetor (icing)

ON THE GROUND:

Rudder: Left & Right

Power: Controls Speed

Brake: Stopping