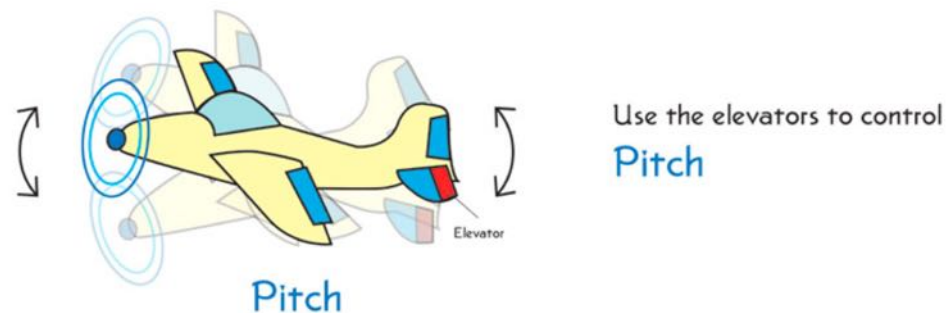
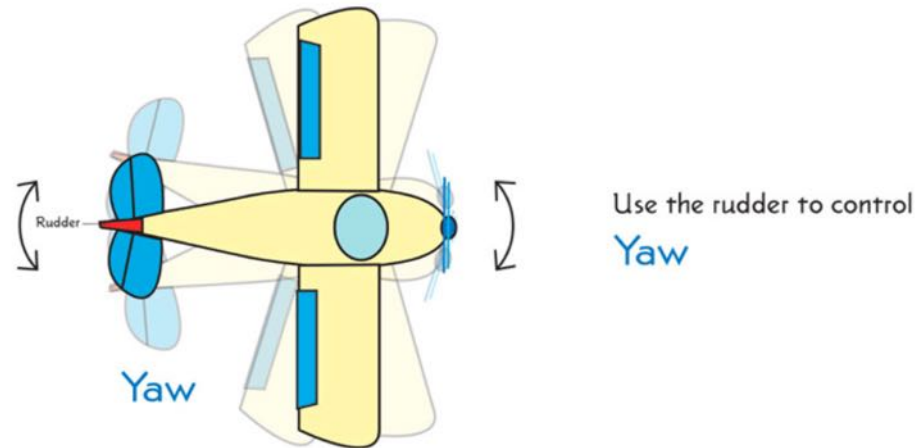
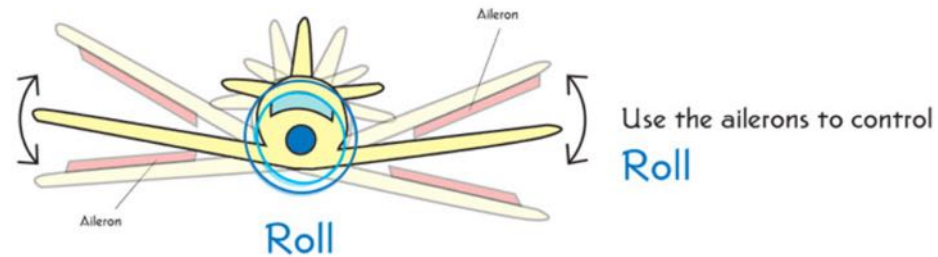


Ex 4 (PART 1) EFFECTS OF CONTROLS










AIM: TO LEARN OPERATION OF THE AIRCRAFT PRIMARY CONTROLS AND THEIR EFFECTS



Ex 4 (PART 1) EFFECTS OF CONTROLS

AIM: TO LEARN OPERATION OF THE AIRCRAFT PRIMARY CONTROLS AND THEIR EFFECTS

T OTHER AIRCRAFT
E LOSS OF CONTROL
M LOOKOUT, HANDOVER, FOLLOW THROUGH

Control	Movement	Axis	Primary Effect	Secondary Effect	More airspeed	More throttle
Elevator		Lateral	Pitch	Speed / Height		
Aileron		Longitudi nal	Roll	Yaw		
Rudder		Normal	Yaw	Roll		

Ex 4 (PART 2) EFFECTS OF CONTROLS - THROTTLE

AIM: TO LEARN THE OPERATION OF SUPPLEMENTARY AIRCRAFT CONTROLS AND THEIR EFFECTS IN FLIGHT

T THREAT: OTHER AIRPLANES

E ERROR: WRONG CONTROLS OPERATED, EXCEED AIRSPEED LIMITATIONS

M MANAGEMENT: LOOKOUT, DOUBLE CHECK CONTROLS, LOI DRILL



Increase
Power



RPM



Noise



Yaw



Pitch

Decrease
Power



Ex 4 (PART 2) EFFECTS OF CONTROLS - TRIM

AIM: TO LEARN THE OPERATION OF SUPPLEMENTARY AIRCRAFT CONTROLS AND THEIR EFFECTS IN FLIGHT

T THREAT: OTHER AIRPLANES

E ERROR: WRONG CONTROLS OPERATED, AIRSPEED LIMITATIONS

M MANAGEMENT: LOOKOUT, DOUBLE CHECK CONTROLS, LOI DRILL

Nose Down



Nose Up



Maintains required attitude in pitch without control pressure:

1. Maintain required attitude with elevator
2. Trim **Nose Up** or **Nose Down** to relieve control pressure

Ex 4 (PART 2) EFFECTS OF CONTROLS - TRIM

AIM: TO LEARN THE OPERATION OF SUPPLEMENTARY AIRCRAFT CONTROLS AND THEIR EFFECTS IN FLIGHT

- T** THREAT: OTHER AIRPLANES
- E** ERROR: WRONG CONTROLS OPERATED, AIRSPEED LIMITATIONS
- M** MANAGEMENT: LOOKOUT, DOUBLE CHECK CONTROLS, LOI DRILL

Nose Down



Nose Up



Maintains required attitude in pitch without control pressure:

1. Maintain required attitude with elevator
2. Trim **Nose Up** or **Nose Down** to relieve control pressure

Ex 4 (PART 2) EFFECTS OF CONTROLS - FLAPS

AIM: TO LEARN THE OPERATION OF SUPPLEMENTARY AIRCRAFT CONTROLS AND THEIR EFFECTS IN FLIGHT

T THREAT: OTHER AIRPLANES

E ERROR: WRONG CONTROLS OPERATED, AIRSPEED LIMITATIONS

M MANAGEMENT: LOOKOUT, DOUBLE CHECK CONTROLS, LOI DRILL



- Limitation
- Operation
- Indication

- Normal attitude for speed below VFE (white arc)
- Select down in stages
- Note pitch change
- Restore normal attitude
- Note speed change
- Select up in stages
- Note sink
- Speed increases



Ex 4 (PART 2) EFFECTS OF CONTROLS - FLAPS

AIM: TO LEARN THE OPERATION OF SUPPLEMENTARY AIRCRAFT CONTROLS AND THEIR EFFECTS IN FLIGHT

- T** THREAT: OTHER AIRPLANES
E ERROR: WRONG CONTROLS OPERATED, AIRSPEED LIMITATIONS
M MANAGEMENT: LOOKOUT, DOUBLE CHECK CONTROLS, LOI DRILL



- **Limitation**
- **Operation**
- **Indication**

- Normal attitude for speed below VFE (white arc)
- Select down in stages
- Note pitch change
- Restore normal attitude
- Note speed change
- Select up in stages
- Note sink
- Speed increases



Ex 4 (PART 2) EFFECTS OF CONTROLS - MIXTURE

AIM: TO LEARN THE OPERATION OF SUPPLEMENTARY AIRCRAFT CONTROLS AND THEIR EFFECTS IN FLIGHT

- T** THREAT: OTHER AIRPLANES
- E** ERROR: WRONG CONTROLS OPERATED, AIRSPEED LIMITATIONS
- M** MANAGEMENT: LOOKOUT, DOUBLE CHECK CONTROLS, LOI DRILL



- Full rich – push fully forward
- Leaning – pull back slightly



- Idle Cut Off ICO – pull fully back

Ex 4 (PART 2) EFFECTS OF CONTROLS – CARBURETTOR HEAT

AIM: TO LEARN THE OPERATION OF SUPPLEMENTARY AIRCRAFT CONTROLS AND THEIR EFFECTS IN FLIGHT

- T** THREAT: OTHER AIRPLANES
- E** ERROR: WRONG CONTROLS OPERATED, AIRSPEED LIMITATIONS
- M** MANAGEMENT: LOOKOUT, DOUBLE CHECK CONTROLS, LOI DRILL



- Off
 - Carb heat off
 - RPM rises to Normal



- On
 - Carb heat on
 - Prevents carb icing
 - Note RPM drop