

Scenario 1 Investigation Pack

Smoke in Cockpit After Take-off



Student Brief

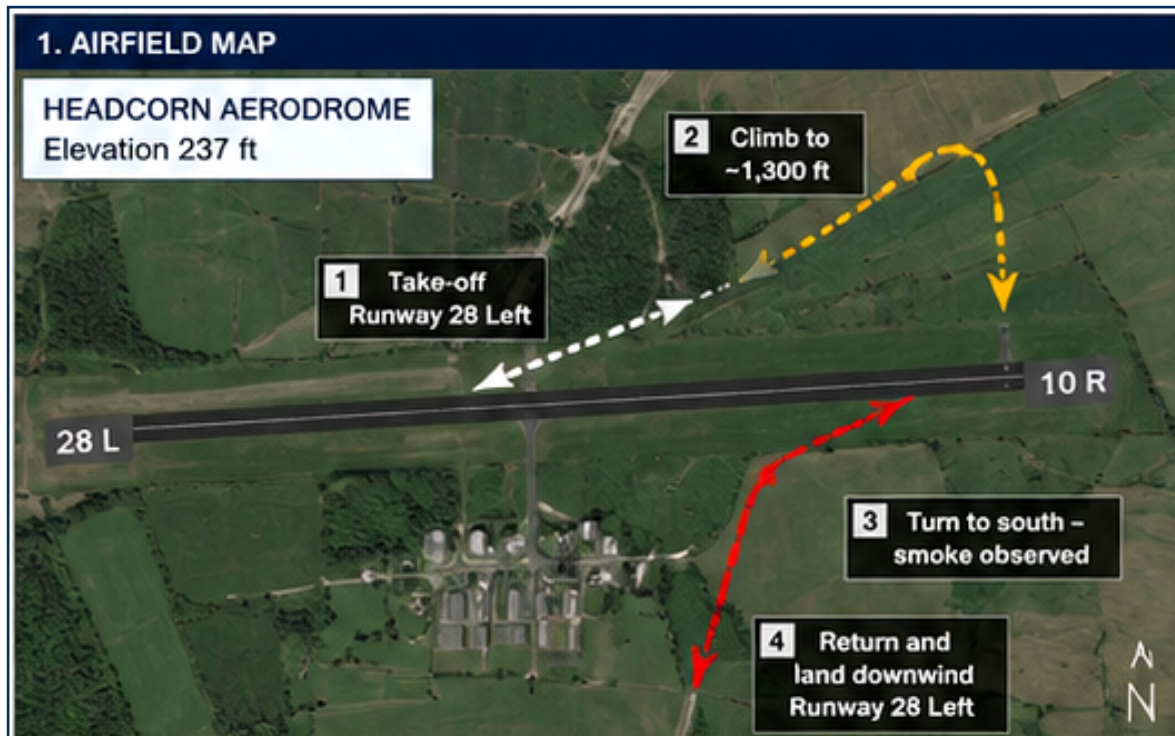
You are the investigation team. Review each section of evidence, make notes, and build an evidence-based explanation. Do not jump to conclusions - separate what you know from what you assume.

Investigation Questions

- What happened?
- What evidence supports your conclusion?
- What factors contributed?
- What safety recommendations would you make?

1. Airfield Map

Map showing take-off from Runway 28 Left, climb, smoke observed, and return for downwind landing.



Notes:

2. Known Timeline

Known events in time order. Use this to identify what happened first and what changed.

2. KNOWN TIMELINE (ALL TIMES UTC)	
TIME	EVENT
1140	Pre-flight checks, engine start and pre-takeoff checks normal
1148	Take-off from Runway 28 Left, Headcorn Aerodrome
1150	Climb to approximately 1,300 ft
1151	Turn to the south outside the ATZ
1152	Smoke first observed in the cockpit
1152	Pilot selects battery master switch OFF – smoke continues
1153	Passenger opens cabin door slightly – smoke reduces
1155	Aircraft positioned for downwind landing Runway 28 Left
1157	Aircraft lands and rolls to a stop
1158	Engine shut down – both occupants exit aircraft
1200	Airfield RFFS attend – battery still burning

Notes:

Statements from the pilot and passenger. Identify what each person observed and any limitations.

Notes:

4. Photos - Damage to Aircraft

Photos of thermal damage and the battery box location.

4. PHOTOS – DAMAGE TO AIRCRAFT



Thermal damage to cockpit floor around the battery box (viewed from above).



Battery box location between seats, under the right seat base.

Notes:

5. Photos - Battery Remains

Recovered battery remains after the fire. Consider what this physical evidence suggests.



Notes:

6. Weather Summary

Weather at the time of the incident. Decide whether weather appears to be a factor.

6. WEATHER AT TIME OF INCIDENT (Head)		
	Wind	250° at 8 kt
	Visibility	> 10 km
	Cloud	Few at 2,000 ft
	Temperature	8 °C
	QNH	1022 hPa
No significant weather expected.		

Notes:

Use all evidence to decide likely causes, contributing factors, lessons and safety recommendations.

7. YOUR TASK

Using all of the information and evidence provided in this pack:

- Identify the most likely cause(s) of the smoke and fire.
- Identify any contributing factors.
- Identify any safety lessons.
- Recommend actions to prevent a recurrence.

Record your findings on the last page.

Notes: