

Aviation Decarbonisation: Hydrogen Planes **EXAMPLE**

[listening test questions]

Author: S. Jackson

Date: 01/07/22

Time: 10.25

Level: **** [B1/B2/C1]

Download Links

Lecture: Available in paying download	MP3: Available in paying download	PowerPoint: Available in paying download
---	---	--

Check these words and phrases before listening:

Key vocabulary

1. Aviation.
2. Hydrogen.
3. Carbon [REDACTED].
4. To trial something.
5. Profound.
6. [REDACTED].
7. Sustainable sources.
8. [REDACTED].
9. To relieve.
10. [REDACTED].
11. Lithium-ion battery.
12. [REDACTED].
13. Methane.
14. Petroleum refinery.
15. [REDACTED].
16. Catalyst.
17. Renewable sources.
18. [REDACTED].
19. To be derived from something.
20. [REDACTED].
21. Water vapour.
22. [REDACTED].
23. Commercially competitive.
24. Capital-intensive industry.
25. [REDACTED].

Copyright: These materials are photocopiable but please leave all logos and web addresses on handouts. **Please don't post these materials onto the web.** Thank you

Teacher

LISTENING TEST QUESTIONS

Aim: to develop the students' ability to listen to a 10 min+ lecture, to take notes and then use those notes to answer a range of test- type questions.

Lesson Time: Approximately 1:30-2:00 hours

Lesson Plan

Lead in

- Ask Students to read the 'title' & predict the content of the lecture.
- Ask students to write down key terms & language from the discussion.
- Feed in / check key vocabulary.

Three types of lesson

Lesson#1: [hard]

1. Students listen once & take notes.
2. Give 5 minutes to tidy notes.
3. Listen again & add to notes (use a different colour pen).
4. Distribute questions – set 20-25 minutes to answer.
5. Feedback: distribute or project answers.

Lesson #2: [medium]

1. Students listen once & take notes.
2. Distribute questions: set 15 minutes for students to answer the questions from their notes.
3. Listen again. Students answer the missed questions as they listen.
4. Give extra 10 minutes to consolidate answers.
5. Feedback: distribute or project answers.

Lesson #3: [easy]

1. Distribute questions. Students have 10 minutes to look at the questions.
2. Students listen & answer the questions.
3. Give 5 minutes to tidy answers.
4. Students listen again. Check answers & answer missed questions.
5. 5-10 minutes to tidy answers.
6. Feedback: distribute or project answers.

Full URL Links:

Video: [Available in paying download](#)

MP3: [Available in paying download](#)

PPT: [Available in paying download](#)

Aviation Decarbonisation: Hydrogen Planes

1. Overview of carbon emissions

1.1 What THREE aspects does [redacted] in?

i.	
ii.	
iii.	

___/3

1.2 Complete the table with the missing figures:

i.	Emissions have reduced more than half in the last..	
ii.	SAF can [redacted] by....	
iii.	Hydrogen can reduce emissions by..	
iv.	Both can [redacted] global responsibility of up to..... by 2050	

___/4

2. Hydrogen Power: Select one answer per question only.

i. Compared to a lithium-ion battery, how much more energy per unit of mass can hydrogen store?

- a) 10 times.
- b) [redacted]
- c) 100 times.
- d) [redacted]

ii. What does steam-methane reforming separate?

- a) Hydrogen atoms from oxygen atoms.
- b) Hydrogen atoms from [redacted].
- c) Carbon atoms from oxygen atoms.
- d) [redacted] atoms.

iii. What [redacted] electrolysis?

- a) No by-products.
- b) [redacted]
- c) Hydrogen and water.
- d) [redacted]

iv. What is the energy [redacted] with Algae and Bacteria?

- a) Biomass gas.
- b) [redacted]
- c) Water.
- d) [redacted]

___/4

3. The reality of using hydrogen fuel: Are these statements true, false or not given?

		T/F/NG
i.	Airbus is in the process of designing hydrogen fuelled planes for corporate use.	
ii.	Airbus will be _____ by 2045.	
iii.	A Boeing _____ passengers.	
iv.	Airbus will require fuel cells _____	
v.	Hydrogen _____ by 2040.	
vi.	By 2050, _____ by hydrogen planes.	

___ / 6

4. The FOUR challenges of using hydrogen power: Complete the table with an explanation of each challenge.

	Challenge	Explanation
i.	Cost.	
ii.	How _____ fuel is.	
iii.	Infrastructure.	
iv.	_____ capacity.	

___ / 4

5. Speaker's stance: What does the speaker question?

i.	
----	--

___ / 2

6. Conclusion: Complete the gaps in the paragraph with a word from the box:

considerably	_____	aviation	_____	costs
--------------	-------	----------	-------	-------

Overall, it is clear that the _____ industry is trying to make _____ changes, but it seems _____ enough _____ in _____ unless _____ are brought down _____.

___ / 5

Total Score ___ / 28

Aviation Decarbonisation: Hydrogen Planes **ANSWERS**

1. Overview of carbon emissions

1.1 What THREE aspects does aviation play a key role in?

i.	<i>Connecting people.</i>
ii.	<i>Transporting goods.</i>
iii.	<i>Supporting the local economy.</i>

___/3

1.2 Complete the table with the missing figures:

i.	Emissions have reduced more than half in the last..	<i>30 years.</i>

ALL ANSWERS ARE INCLUDED IN PAID VERSION...

Aviation Decarbonisation: Hydrogen Planes [Transcript]

Hello and welcome to today's lecture on Aviation Decarbonisation and we'll be specifically looking at hydrogen-powered Planes. I'll start the lecture today with a basic overview of aviation carbon emissions and highlight the two main alternatives to traditional aviation fuel. I'll then look at hydrogen energy and discuss how it is made. After that I'll discuss how the company Airbus is trialing hydrogen fuel technology with the hope to start commercial flights by 2035. This will then follow by looking at the challenges of implementing hydrogen to become commercially competitive and I'll finish with a summary of my findings.

Ok, so let's start with an overview of carbon emissions. As aviation continues to play a key role in connecting people, transporting goods and supporting the global economy, there are worrying signs that unless significant changes

THE FULL TRANSCRIPT IS INCLUDED IN THE PAID VERSION...