

Listening note-taking methods 4 (Science)

EXAMPLE

Aim: To help students improve their lecture note-taking skills by introducing them to the Cornell notes system. Students will use the system to practise taking notes for five mini lectures.

Time: 90 minutes & homework task.

Delivery: This lesson can be delivered face-to-face or online. For online delivery, each worksheet could be placed in a class document on OneDrive or OneNote.

Lead in

- Distribute or project **worksheet 1**. Students complete **task 1**: mini questionnaire on note taking.
- Feedback: nominate one or two students to share their answers.
- Students complete **task 2**: introduction to Cornell and the five 5s.
- Feedback: nominate one or two students to share their answers and then distribute or project **worksheet 2: task 1 5Rs ANSWERS**.

Video: [link available in paid download](#)

MP3: [link available in paid download](#)

Guided Practice

- Students read **task 2**: format of lecture listening and note-taking practice. Teacher checks understanding.
- Distribute **worksheet 3**: note-taking practice. Teachers follow the format allowing 15 minutes per lecture:
 - i. **Pre-listening**
Students discuss the topic and check any words that arise. Teachers could pre-teach vocabulary from the script for lower groups.
 - ii. **Listening**
Students listen and take notes in the main column using abbreviations and symbols.
 - iii. **Post-listening**
Students tidy answers, compare answers for content, complete the left column with corresponding questions, complete the summary section and write down opinion/thoughts/ideas on lecture topic.
 - iv. **Additional stage**
Hold a seminar on the topic of technology. Students discuss the lectures using their notes and stating their opinions.

Homework

- Students choose a topic connected to their studies, find a lecture on TED talks, listen and take notes using the Cornell system and either: 1. Use their notes to give a mini presentation to the class on the topic. 2. Use their notes to write a paragraph on the topic.
- Feedback: 1. Assess students presentation skills. Use our feedback sheet: <https://www.academic-englishuk.com/wp-content/uploads/2018/12/AEUK-Feedback-presentation-1.docx>
- Feedback 2: Assess students on their written skills. Use our error correction code: <https://academic-englishuk.com/wp-content/uploads/2017/03/Error-Correction-Code-AEUK.pdf>

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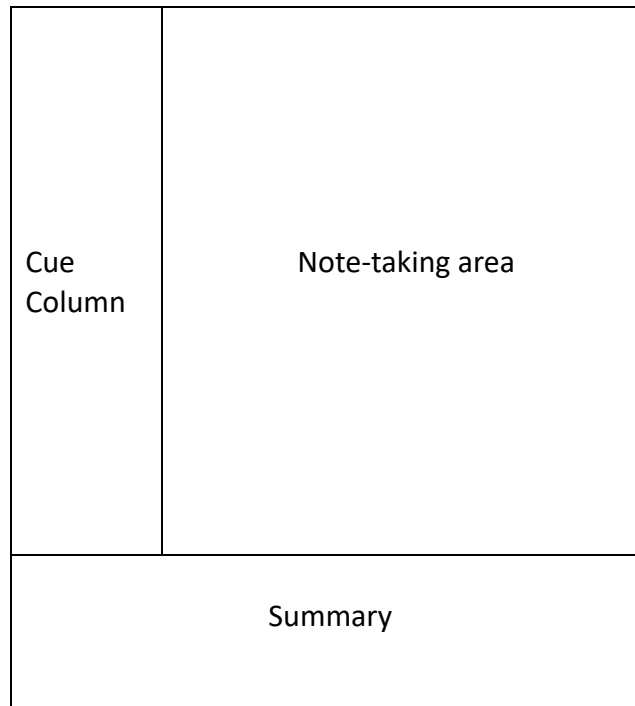
Worksheet 1: Introduction to Cornell Notes

Task 1

- Discuss these questions with your partner.
 - i. Do you enjoy taking notes while listening?
 - ii. What do [REDACTED]?
 - iii. What feedback have you been given on your note-taking skills?
 - iv. What do you think [REDACTED]?
 - v. How are note-taking skills assessed on the course you're currently on?

Task 2

- One note-taking method popular with university students is the Cornell notes system designed by an education professor in the 1940s. Take a look at the note-taking format below and ask your partner the following questions:
 - i. Have you seen this method before?
 - ii. What do you think each column is for?
 - iii. There are five stages in this system, and they all begin with the letter 'R'. What do you think they are? R _____ R _____ R _____ R _____ R _____



⇒ Check your answers on the next page (worksheet 2).

Worksheet 2: Cornell Notes System

Task 1:

- Read about the five Rs. What do you think of this system? Tell your partner.

Stage 1: Record

During the lecture, record as much information as you can in the main column.

Stage 2: Reduce

After the lecture, [redacted] the main column. These questions can be answered when you're reviewing the lecture.

Stage 3: Recite

After the lecture, [redacted] from the left column. See if you can answer the questions without looking at your notes in the main column.

Stage 4: [redacted]

Think about your own opinions [redacted]. Write these ideas down in a notebook and then use them in essays, exams, seminars or presentations.

Stage 5: Review

Spend ten minutes [redacted] notes.

Task 2

- You're now going to listen to five two-minute lectures so that you can practise the Cornell note-taking system. Each practice will follow the same format:

Pre-listening
Discuss the topic questions in small groups of three and look up any words that you don't know from your discussion.
Listening
Listen and take notes in the main column. Use abbreviations and symbols so that you can write more content.
Post-listening
Tidy notes in the main column. Rewrite words that aren't clear, check spelling, reduce sentences. Write study questions and cue words in the left column. Write a summary of the listening in one-three sentences in the bottom section. Think about your opinion on the topic and make a few notes in your notebook.

Worksheet 3: Note-taking Practice

Lecture 1: This lecture is about the International Space Station (ISS). Discuss the following questions with your partner.

- i. What do you know about the ISS?
- ii. What _____.
- iii. What would you like or dislike about staying on the ISS?
- iv. Do you think the ISS _____?

⇒ Now listen to the lecture and complete the main column.

- Compare your notes with a partner. Have you recorded the same information?
- Now complete the post-listening tasks.

Lecture 2: This lecture is about gene editing. Discuss the following questions with your partner.

- i. Why do some parents wish to modify the genes of their children?
- ii. Is gene editing ethical [redacted]?
- iii. Do you think gene editing is more acceptable for a medical argument?
- iv. Should gene [redacted]?
- v. Check these terms: *sickle cell disease / cystic fibrosis / CRISPR / somatic and germ cells*.

⇒ Now listen to the lecture and complete the main column.

- Compare your notes with a partner. Have you recorded the same information?
- Now complete the post-listening tasks.

Lecture 3: This lecture is about the Covid-19 vaccines. Discuss the following questions with your partner.

- i. Which vaccines have been approved in your country?
- ii. What do you [redacted] ?
- iii. Would you consider having the vaccine yourself?
- iv. Do you think [redacted] virus?
- v. Check these vaccine terms: *viral vector / nucleic acid / inactivated / protein / attenuated*.

⇒ Now listen to the lecture and complete the main column.

- Compare your notes with a partner. Have you recorded the same information?
- Now complete the post-listening tasks.

Lecture 4: This lecture is about endothermic and ectothermic species. Discuss the following questions with your partner.

- i. Do you know which animals are warm-blooded?
- ii. Do you [redacted] ?
- iii. Do you think one type find it easier to survive than the other?
- iv. Would [redacted] ?

⇒ Now listen to the lecture and complete the main column.

- Compare your notes with a partner. Have you recorded the same information?
- Now complete the post-listening tasks.

Lecture 5: This lecture is about the Antarctic ozone hole. Discuss the following questions with your partner.

- i. What do you know about the ozone layer?
- ii. Why do you [redacted] ?
- iii. Why do you think it's particularly crucial in areas such as the Antarctic?
- iv. Do you [redacted] ?

⇒ Now listen to the lecture and complete the main column.

- Compare your notes with a partner. Have you recorded the same information?
- Now complete the post-listening tasks.

SCRIPTS & SAMPLE NOTES

Lecture 1

Hello, I'm going to talk to you today about Earth's only microgravity laboratory: the International Space Station (ISS). Orbiting above Earth at 227 nautical miles, the space station is the size of a football pitch, travels at 17,500 mph and revolves around ...

FULL TRANSCRIPT INCLUDED IN THE PAID VERSION...

Notes

<p>Definition? Location?</p> <p>_____?</p> <p>Time to build? Cost?</p> <p>What _____ contain?</p> <p>First occupied? Who?</p> <p>_____?</p> <p>Purpose?</p> <p>_____?</p> <p>_____ astronauts?</p> <p>_____ tasks?</p>	<p>The International Space Station (ISS). _____ laboratory. 227 nautical m above Earth.</p> <p>Sz = _____, travels 17,500mph, _____</p> <p>Ten yrs, _____</p> <p>Modules: three decks, 16 labs, _____ ↓ flight, living, safety</p> <p>_____ = 3-mem. (2 Russ, 1 USA) _____. Perm. occupied.</p> <p>Int. teams = stay _____</p> <p>Lrn abt living & wrking in _____ ↓ _____ grav. effects on _____</p> <p>Send astronauts _____</p> <p>i. Conduct. scientific exp. ii. _____ iii. Observe sun & other objs.</p> <p>i. Maintain stat. ii. _____</p>
<p>The International Space Station (ISS) is a microgravity _____ It's been permanently _____ study the effects of living in space since _____. As the eventual goal is to send people into _____ space, _____, _____ the sun.</p>	

Lecture 2

Hello, I'm going to talk to you today about gene editing. Gene editing refers to the practice of altering the genetic code of an organism either by removing, replacing or adding segments of its DNA. Currently, most genetic engineering is centred around ...

FULL TRANSCRIPT INCLUDED IN THE PAID VERSION...

Notes

	<u>Gene editing</u>
What is it?	Chngs. to an org.'s [redacted]
[redacted] ?	[redacted]
What can it do?	Humans: Prev./treat. gen. dis. e.g. sickle cell; cystic [redacted] Animals: [redacted]
[redacted] CRISPR?	Tech. alters somatic & [redacted]
What's the difference [redacted] & germ cells?	Som.: [redacted] Germ: sex. reprod. cells
Why is altering germ [redacted] ?	[redacted]. cells = [redacted] Edit germ cells = nt legal 4 human implant.; can be misused
Who are [redacted] & Nana?	2 gen. modi. [redacted] Implant. in human in [redacted]
What does the future hold?	Eth. qus. [redacted] or intel.
<p>Gene editing, which is the ability to [redacted] organism's [redacted] [redacted] for the prevention and treatment of genetic [redacted] in humans as well as for increasing disease [redacted] in some animals. [redacted] is currently legal but questions remain [redacted] and eggs cells [redacted]</p>	

Lecture 3

Hello, I'm going to talk to you today about the different Covid-19 vaccines. Since late 2020, several vaccines have been developed, of which approximately nine have been approved for use around the world. These vaccines fall into three main categories ...

FULL TRANSCRIPT INCLUDED IN THE PAID VERSION...

Notes

<p>How many are there?</p> <p>What are [redacted] types?</p> <p>Which [redacted] in the UK?</p> <p>[redacted] ?</p> <p>How are [redacted] ?</p>	<p><u>Covid-19 Vaccines</u></p> <p>9 approv. worldwide: types 1-3 [redacted]</p> <p>1. Viral vector 2. [redacted] 3. Inactivated 4. [redacted] 5. Attenuated</p> <p>AstraZeneca/Oxford – type 1 [redacted]</p> <p>AZ/O: Uses harmless version of [redacted] (vector) [redacted] [redacted] Recogn. by immune system [redacted]</p> <p>P/BNT: [redacted] parts of virus' [redacted] When in cells spike protein is prod. 4ms [redacted]</p> <p>AZ/O: fridge temp. P/BNT: [redacted]</p>
<p>There are currently 9 Covid-19 vaccines in use worldwide, [redacted]. The [redacted] are either viral vectors or [redacted] vaccines, such as the AstraZeneca/Oxford vaccine or the Pfizer/[redacted] used in the UK. [redacted] they [redacted] and the [redacted] [redacted]</p>	

Lecture 4

Hello, I'm going to talk to you today about endotherms and ectotherms. Most species can be divided into these two groups. Typically, humans, birds and mammals are known as endothermic species, whereas reptiles, amphibians, most fish and invertebrates...

FULL TRANSCRIPT INCLUDED IN THE PAID VERSION...

Notes

<p>Which species are which?</p> <p>How do endotherms ?</p> <p>How do ectotherms ?</p> <p>Which species are a combination?</p>	<p><u>Endotherms and ectotherms</u></p> <p>Endo: ppl, birds, mammals</p> <p>Warm-blooded = gen. heat internally If 2 much heat = Maintain heat thru burn fuel – food</p> <p>Can gen. heat internally BUT can't maintain w/o e.g. – ecto. when e.g. shark – can gen. heat +than water it's in</p>
<p>Endothermic, or body heat burning fuel from the food they eat. They adjust their body temperature if they Conversely, ectothermic body heat but the environment they live in.</p>	

Lecture 5

Hello, I'm going to talk to you today about the Antarctic ozone hole. An ozone hole is caused by the thinning of the ozone layer due to human-made chemicals such as halons and chlorofluorocarbons (CFCs) coupled with a colder climate. Since circa 1970, ...

FULL TRANSCRIPT INCLUDED IN THE PAID VERSION...

Notes

<u>Antarctic Ozone Hole</u>	
What is it?	Hole in ozone layer above Antarctica MON. by [REDACTED]
[REDACTED] ?	Ozone gets +thin due 2 halons & [REDACTED] [REDACTED]
How [REDACTED] 2020?	24 mil. sq. km.
How [REDACTED] in?	[REDACTED]
Why [REDACTED] different?	Largest ever [REDACTED] vortex & [REDACTED] Took ages 2 close [REDACTED]
When [REDACTED] it finally close?	+warm temps.
Is the ozone on a path to recovery?	Yes – Montreal Agmt ban on [REDACTED] No – [REDACTED]
<p>The ozone hole in the Antarctic of 2020 [REDACTED] which had been [REDACTED] began in 1970, was mainly as a result of the [REDACTED] of a cold polar vortex and the continuous [REDACTED] human-made [REDACTED] scientists predict that the ozone levels will [REDACTED] what they were [REDACTED]</p>	