



Biohacking



Instant Lessons

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Lesson Plan: Biohacking **EXAMPLE**

Lessons: Introduction, reading, listening, speaking (seminar) and writing.

Time: 1-1.5 hours.

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

Lesson Aim:

To focus on one key topic and develop a range of key academic skills based on this topic.

Introduction [5 minutes]

- Introduce the topic 'Biohacking'.
- Give out the '**Biohacking Reading Text Worksheet**' and discuss the lead in questions.

Reading: Test-Type Questions [20-30 minutes]

- Students read the text. Check words & meanings with a dictionary.
- Answer the questions.
- Feedback: distribute or project **ANSWERS**

Listening: Lecture & Test Questions [30-40 minutes]

Video (3:40): Available in paid download

MP3: Available in paid download

- Give out the '**Listening: Mini Lecture Worksheet**'.
- Students check key vocabulary.

Option 1

- Students look at the questions.
- Students listen & answer the questions.
- Give 2 minutes to tidy answers.
- Students listen again. Check answers & answer missed questions.
- Feedback: distribute or project **ANSWERS**.

Option 2

- Students listen & take notes (Use paper or the PPT slides in the Appendix).
- Students listen again & add to their notes.
- Students use their notes to answer the questions.
- Feedback: distribute or project **ANSWERS**.

Speaking: Seminar [10-15 minutes]

- Give out the '**Speaking Worksheet**'.
- Students revise content from the reading & lecture texts.
- Students hold a seminar discussion using the question prompts.
How to run a seminar: <https://www.academic-englishuk.com/seminars>

Writing: Summary [20 minutes + tutor feedback]

- This can be a homework task if limited time.
- Students use the two texts (reading and listening) to write a 150-word paragraph on 'the '.
- Tutor to error correct & return - <https://www.academic-englishuk.com/error-correction>

Biohacking Reading Text Worksheet

Task 1: Lead In

1. Have you ever heard of Biohacking?
2. What do you think it means?
3. Look at the title of the reading text – what do you think it is about?

Task 2: Reading Text: **The Biohacking Movement**

By A. Watson (2021)

In our drive to look younger and live longer, a new lifestyle has emerged in the last few years. Biohacking, [redacted] Samuel (2019) [redacted] manipulate your brain and body in order to optimize performance, outside the realm of traditional [redacted] was first coined by [redacted] the biohacker” in 1988, it was not until 2014 that it gained popularity. Mostly based in Silicon Valley, biohackers [redacted] their bodies and [redacted] peak performance (ibid).

One pioneer of this movement is [redacted] facility which uses [redacted] equipment to supercharge a person’s body. This is achieved through the use of various methods, for example, [redacted] cold temperature; [redacted] waves are used to warm the body; ozone saunas where steam is used to infuse oxygen into the skin and PEMF (pulsed electromagnetic field) [redacted] to restore [redacted] treatments reduce inflammation, improve cognition, remove toxins and enhance longevity.

Taking biohacking to another level, [redacted] into their bodies (Samuel, 2019) to become cybernetic organisms. One example is a near-field communication (NFC) chip that [redacted] Other extreme examples include Nootropics (smart drugs) that are used to boost brain performance, [redacted] joint pain [redacted] aging. These may seem rather excessive and in fact dangerous; however, the most controversial biohack [redacted].

Although Crispr [redacted] to eradicate [redacted] are buying do-it-yourself kits to practise gene editing in their homes (Pearlman. 2017). This is completely legal as long as [redacted] is not clear how many users are self-administering Crispr, but there is a concern in the scientific community that people could [redacted] to understand why people would wish to explore unconventional ideas in a bid to extend their life, but [redacted] popularity around the world, and with its 7th annual biohacking conference coming up, this is a [redacted]

References

Johnson, C. 2019. *Travel on trial*. [redacted] [online] Available at <https://www.telegraph.co.uk/travel/destinations/north-america/united-states/california/los-angeles/> [Accessed 24 February 2021].

[redacted] are using CRISPR on their DNA and we can’t stop it. [online] Available at <https://www.newscientist.com/article/biohackers> [Accessed 24 February 2021].

Samuel, S. 2019. [redacted] – *and human nature*. [online] Available at <https://www.vox.com/future-perfect/2019/6/25/18682583/biohacking/> [Accessed 24 February 2021].

Reading Text Questions

Task 3: Headings

Choose a subheading for each paragraph.

1		A	Extreme cases
2		B	
3		C	Futuristic amenities
4		D	

____ / 4

Task 4: True, False or Not Given

Decide if these statements are true (T), false (F) or not given (NG). Highlight the answer in the text.

		T / F / NG
1	Biohackers use traditional medicine to improve their performance.	
2		
3	The world's first biohacking centre is in the US.	
4	warm temperatures.	
5	Some people want to become cyborgs.	
6		
7	Some people are practising gene editing on themselves.	
8		

____ / 8

Task 5: Vocabulary

Key language – search for a word in the text that means:

Paragraph		Word
1	To change something.	
1		
2	To return something to a good condition.	
2		
3	More than is necessary or normal.	
3		
4	To get rid of something bad.	
4		

____ / 8

Total Score ____ / 20

Listening: Mini Lecture Worksheet

Task 1: Key Vocabulary

Check these words and phrases before listening:

cybernetic		universal discipline.			prosthetic
	mimic.	alleviate.		enhanced.	mechanical device.
constraints.	ethical.		intellectual gulf.	join	
					CRISPR.
					alter.

Task 2: Lecture Listening

Listen to the lecture _____ and answer the following questions:



2.1 Gap Fill

What are cybernetic organisms? Complete the gaps. The first letter is already given.

C _____ are _____ and m _____
body parts to either improve body m _____ or to enhance one's capabilities.

____ / 3

2.2 Open Questions

i.	What two _____ ?	
ii.	Who benefits from cochlear implants?	
iii.	_____	
iv.	Who benefits from brain pacemakers?	
v.	How _____ each year?	

____ / 6

2.3 Multiple Choice

Choose ONE answer only for each question.

i.	Exoskeletons provide the user with..	A. _____
		B. Artificial strength and endurance.
		C. _____
ii.	_____ be..	A. 100 times smarter than us.
		B. _____
		C. 1,000,000 times smarter than us.
iii.	Some in the field think that...	_____
		B. Humans will need protection from cyborgs.

iv.	Which of these ethical _____ serious?	A. Intellectual gulf.

		C. The interference with the blue print of life.

____ / 4

2.4 Gap Fill

What does the lecturer _____ ? Complete the gaps.

This may seem like science _____ but it is, actually, science _____.
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____ / 2

Total Score ____ / 15

Speaking Worksheet

Discussion

Use the two texts (reading and listening) to discuss these questions.

Key Sources:

Reading: Watson (2021) Johnson (2019) / [redacted] Samuel (2019)	Lecture: Watts (2021) The Medical Futurist (2019)
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Seminar Questions

- 1) Define the terms biohacking and cybernetic organisms.
- 2) Discuss [redacted] the two texts.
- 3) Discuss [redacted] organisms.
- 4) Would you ever use [redacted] body? How far would you go?
- 5) Summarise your discussion.
(Each person summarises one main interesting point discussed).

Writing Task

Summary

Use the two texts (reading and listening) to write a paragraph on 'the reasons why some people [redacted]'.

Write 150 words:

Reading ANSWERS

Task 3: Headings

Choose a subheading for each paragraph.

1	D	A	Extreme cases
2	C	B	Contentious risks

ALL ANSWERS ARE INCLUDED IN PAID VERSION...

Listening ANSWERS

2.1 Gap Fill

i) What are cybernetic organisms? Complete the gaps. The first letter is already given.

Cyborgs are a combination of organic and *mechanical* body parts to either improve body *malfunctions* or to enhance one's capabilities.

ALL ANSWERS ARE INCLUDED IN PAID VERSION...

Cybernetic Organisms lecture transcript


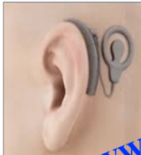








(C. Watts 2021)

Hello and welcome to this mini lecture on cybernetic organisms or commonly known as cyborgs. According to the Medical Futurist 2019, cyborgs are a combination of organic and mechanical body parts to either improve body malfunctions or to enhance one's capabilities. The term 'Cyborg' was coined in 1960 by Manfred Clynes, it was used to describe the technological enhancement of the human body for space travel through the use of DRUGS and SURGERY....

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

Appendix: PowerPoint Slides

Listen to the lecture and take notes using the PPT slides

<p>Cyborgs</p> <p>Definition (Medical Futurist, 2019)</p>  <p>Manfred Clynes</p> <p>www.academic-englishuk.com</p> <p>AE Academic English UK</p>	
<p>Cyborg technology</p>     <p>cochlear implants artificial retinas prosthetic limbs brain pacemakers</p> <p>www.academic-englishuk.com</p> <p>AE Academic English UK</p>	
<p>Rapid Advancement</p>     <p>exoskeletons translation earbuds brain-computer interfaces</p> <p>www.academic-englishuk.com</p> <p>AE Academic English UK</p>	<p>www.academic-englishuk.com</p>
<p>Ethical questions</p> <ol style="list-style-type: none"> 1. Intellectual gulf 2. Pressure to join or fall behind 3. Interference with the blue print of life  <p>CRISPR</p> <p>www.academic-englishuk.com</p> <p>AE Academic English UK</p>	