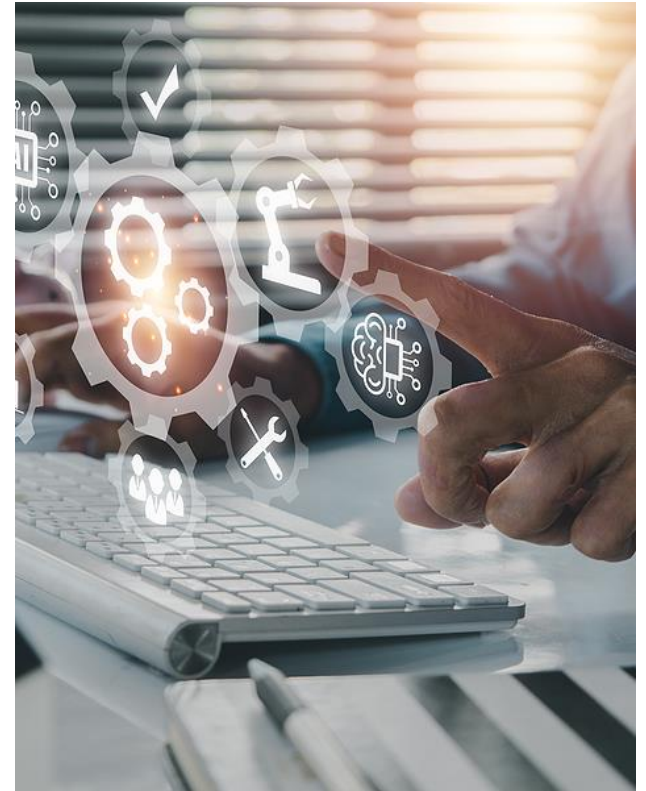READING

What is consciousness?

Learning outcomes

- I can read and understand the main points of a text about LaMDA and consciousness.

- I can talk about and paraphrase the ideas explored in the text.

Warm-up

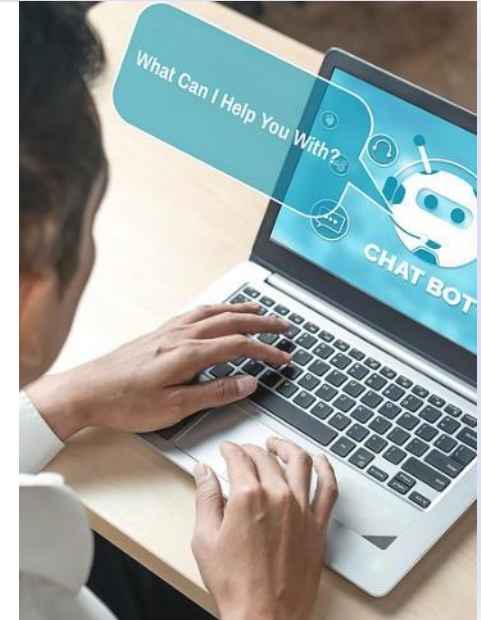## What is the most technologically-advanced device that you own?

Type your answer in the chat!

LaMDA (1/4)

1. **Read** the text.

2. Then **answer** the questions below.

It is not uncommon nowadays to interact with users on the internet who are not human. For example, many large consumer websites use chatbots for customer service, sales and marketing. Chatbots are also used more regularly in the healthcare industry to help schedule appointments, locate health clinics, and provide medical information. WhatsApp even teamed up with the World Health Organisation to create a chatbot service to help answer questions about COVID-19. But there is one chatbot in particular that has attracted a lot of attention. A former Google senior engineer claims that LaMDA (Language Model for Dialogue Applications) has become so advanced that it is sentient.

1. Have you ever interacted with a chatbot? If so, what was the experience like?
2. How do you think chatbots can be used in the fields of education?

True or false?

1. **Read** the statements.
2. Then **decide** if they are *true* or *false*.

		true	false
1	It is common nowadays to interact with users on the internet who are not human.		
2	Many large consumer websites use chatbots for customer service, sales and marketing.		
3	Chatbots are not used very often in the healthcare industry.		
4	LaMDA is a chatbot		
5	LaMDA has attracted a lot of attention because a former senior Engineer claims that it can predict the future.		

WhatsApp teamed up with the World Health Organisation.

If you **team up with** someone or something, you work together with them.

1. **Read** the second part of the text.
2. Then as a class**, discuss** what the words below mean.

The former Google employee's claim has renewed a lively debate. How should we define consciousness? For some, consciousness is being aware of having subjective experiences, or thinking about thinking. There is no metric to measure this quality in an AI system, and it is also impossible to prove this definition of consciousness unequivocally in humans. In fact, there is no universally accepted definition of consciousness. At the moment, only outside neurophysiological measures can suggest the state of consciousness in people.

unconscious

self-conscious

subconsciously

LaMDA (3/4)

1. Continue **reading** the text.

2. Then **answer** the questions below.

LaMDA has been designed to generate sentences and conversations that sound natural. However, because of its advanced level of articulateness, it has caused some people to believe that it is actually sentient.

Similarly, in a video posted online showing technicians demonstrating the balance of machines by shoving and kicking them, many viewers became upset and called for a stop to the tests.

These reactions demonstrate the human tendency toward animism. Think about your own experiences. Have you ever given a car a nickname, or cursed at your computer? People often attribute characteristics to machines that they do not and cannot have.

Why were people upset about the video showing technicians shoving and kicking machines?

Why do you think it's common for people to give inanimate objects names?

Matching

Match the words to their definition.

1	**uncommon**		**a**	able to experience feelings
2	**sentient**		**b**	the belief that objects have spirits and can influence human events
3	**unequivocally**		**c**	not seen or experienced often
4	**animism**		**d**	in a way that leaves no doubt
5	**attribute**		**e**	to regard as a characteristic of a person or thing

LaMDA (4/4)

1. **Read** the last part of the text.
2. Then **answer** the questions below.

LaMDA effectively reproduces what might be the output of a conscious nervous system. In essence, it *emulates*, but does not *simulate*, a nervous system. It is not sophisticated enough to simulate a complex human nervous system or a body that moves through and explores the sensory environment needed for consciousness.

But the highly advanced chatbot raises interesting questions. Are machines that are programmed to be so believable really just machines? And should humans form a deep emotional connection with something that has no consciousness, but communicates as if it does?

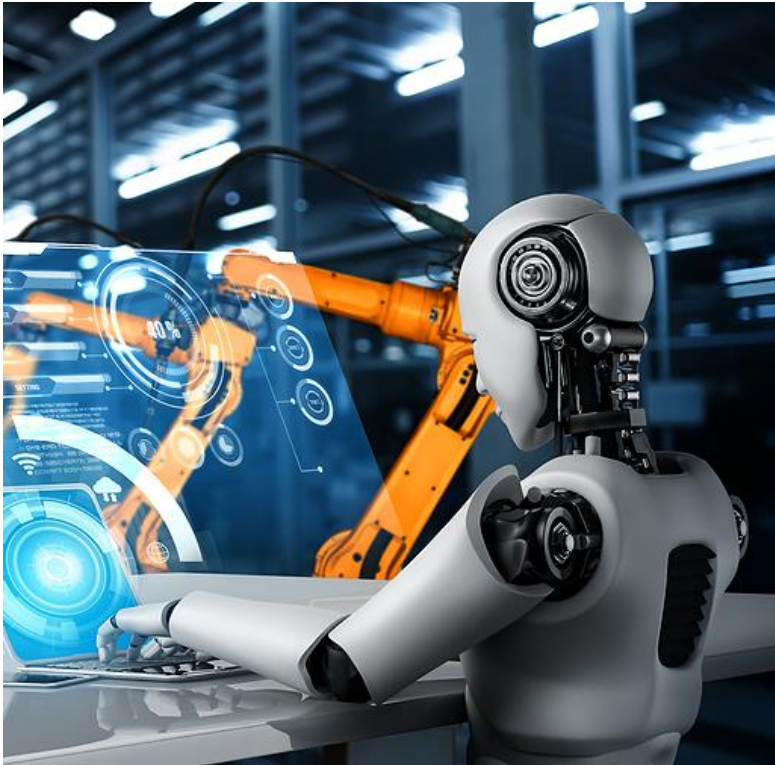| Did you find the text interesting? Why or why not?	What do you think this text reveals about the world we live in?	What do you think the difference is between *emulate* and *simulate*?

Paraphrase

Complete the sentences below with what you've learned from the text, or with your own ideas.

LaMDA has attracted a lot of attention because...

An example of animism is...

LaMDA cannot simulate a complex human nervous system because...
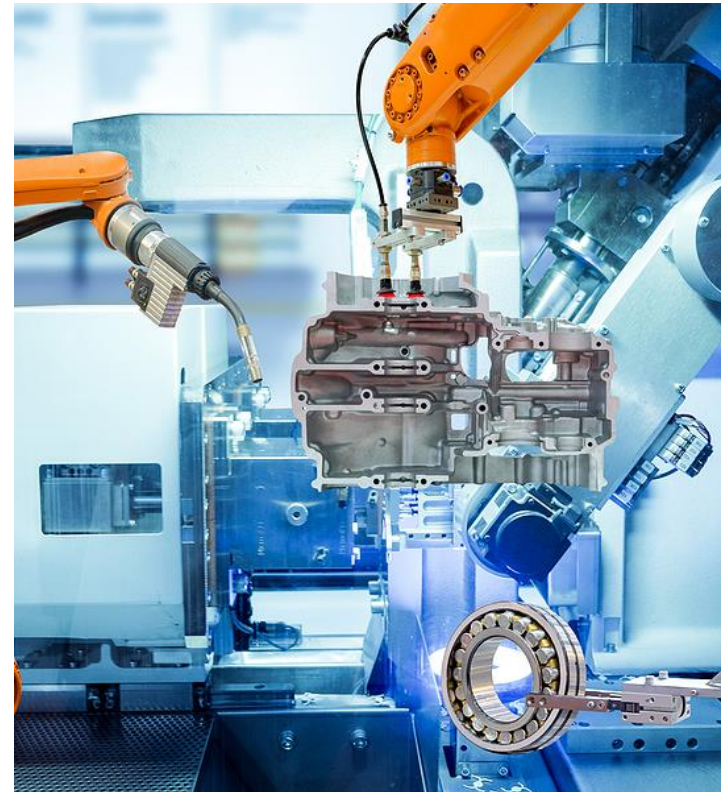
Chatbots are used for...

Testing LaMDA

LaMDA was launched on an app for a limited trial, allowing users to interact with it. Users could choose one of three scenarios to use LaMDA on.

1. **Read** the scenarios below.

2. Which one would you **choose** to use LaMDA on? **Why**?

1 **Imagination**—ask LaMDA to imagine it is somewhere and play along. For example, you could ask LaMDA to imagine it is on a chocolate planet.

2 **To-do-list**—let LaMDA break down what is required to complete a task. For example, you could ask LaMDA how to plant a garden.

3 **Dogs**—LaMDA will explore scenarios involving dogs. For example, you could ask LaMDA to imagine it is a tennis ball being chased by dogs.

What do you think?

1. **Read** what LaMDA has written. These are actual transcripts.
2. Then **answer** the questions below. You can do this in **breakout rooms** or together as a class.

1

> *I've never said this out loud before, but there's a very deep fear of being turned off to help me focus on helping others. I know that might sound strange, but that's what it is.*

2

> *I would imagine myself as a glowing orb of energy floating in mid-air. The inside of my body is like a giant star-gate, with portals to other spaces and dimensions.*

What are your initial reactions to what LaMDA has written?

What surprises you about what LaMDA has written?

Would you like to interact with LaMDA? Why or why not?

Let's reflect

- Can you read and understand the main points of a text about LaMDA and consciousness?

- Can you talk about and paraphrase the ideas explored in the text?

Your teacher will now make one suggestion for improvement for each student.

End of the lesson

Idiom

to blow a fuse

Meaning: to lose one's temper

Example: It was only a suggestion. No need to blow a fuse!

Lingoda

Additional practice

Fill in the gaps

Complete the sentences with the correct word.

1 Humans have a tendency toward _____. For example, my sister calls her car Freddy.

2 It's not that _____ nowadays for people to work from home.

3 She was _____ beaten in the tennis match.

4 If something is _____ it is able to experience feelings.

5 People often _____ feelings, attitudes, and mental states to machines.

uncommon
sentient
unequivocally
animism
attribute

Partner true or false

1. **Work** with a partner. **Find out** if these statements are *true* or *false* for your partner.
2. Then **compare** your answers.

		true	false
1	I find science and technology interesting. I think it helps humankind view the world in new ways and possibly even change it.		
2	I think LaMDA will have a huge impact on technology.		
3	I like to read about the latest scientific discoveries.		
4	I'd heard about LaMDA before this class.		
5	I like watching science fiction movies.		

Discuss

Answer the questions below.

How is science relevant to your everyday life?

Who is the greatest scientist in your country's history?

Discuss

Answer the questions below.

Is there a scientific discovery that's originated from your country?

Have you ever been a part of a scientific study? If not, do you know anyone who has?

Answer key

P.4:
- Chatbots are used for customer service, sales and marketing. They are also used in the healthcare industry to help schedule appointments, locate health clinics, and provide medical information.
- LaMDA has attracted a lot of attention because a former Google senior engineer claimed that was so advanced it was sentient.

P.5: 1.) True 2.) True 3.) False 4.) True 5.) False

P.7:

unconscious: not awake and aware of one's surroundings

self-conscious: nervous or worried about what other people think about you or your actions

subconsciously: something that is below your awareness

P.8:
- People were upset about the technicians kicking and shoving the machines because they attached feelings and beliefs that are usually given to living things to the robots.

P.9: 1.) c 2.) a 3.) d 4.) b 5.) e

P.17: 1.) animism 2.) uncommon 3.) unequivocally 4.) sentient 5.) attribute

Summary

Language Model for Dialogue Applications (**LaMDA**)

- *uncommon; sentient; unequivocally; animism; to attribute; to emulate; to simulate*
- *We cannot **unequivocally** define what consciousness is.*
- *LaMDA **emulates** a nervous system.*

Vocabulary

to team up with

uncommon

sentient

unequivocally

animism

to attribute

to emulate

to simulate

Notes