

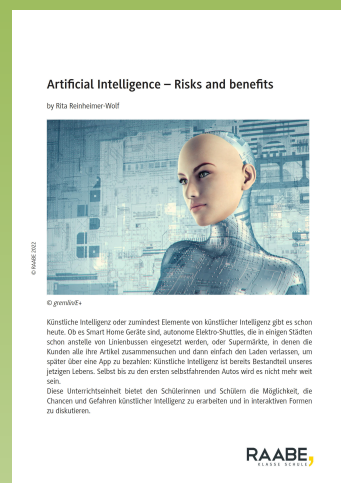
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Auszug aus: *Artificial Intelligence*

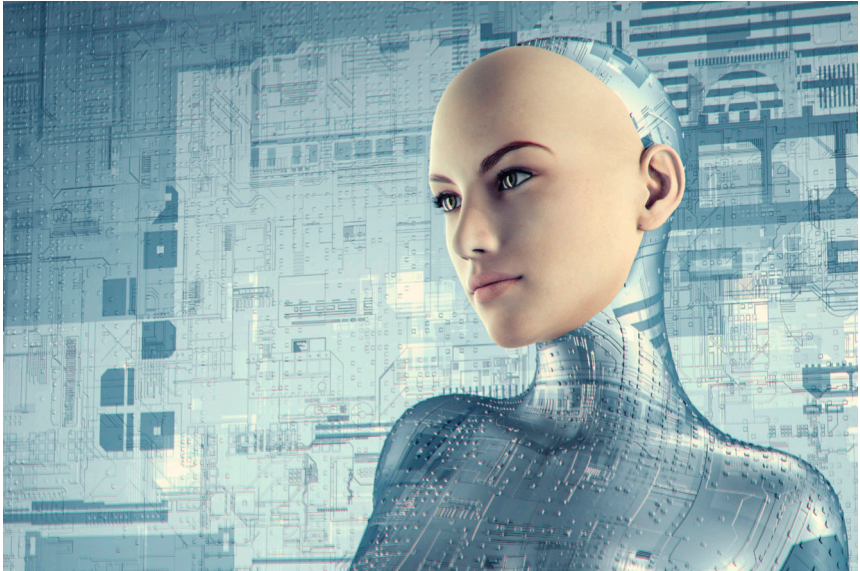
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Artificial Intelligence – Risks and benefits

by Rita Reinheimer-Wolf



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Künstliche Intelligenz oder zumindest Elemente von künstlicher Intelligenz gibt es schon heute. Ob es Smart Home Geräte sind, autonome Elektro-Shuttles, die in einigen Städten schon anstelle von Linienbussen eingesetzt werden, oder Supermärkte, in denen die Kunden alle ihre Artikel zusammensuchen und dann einfach den Laden verlassen, um später über eine App zu bezahlen: Künstliche Intelligenz ist bereits Bestandteil unseres jetzigen Lebens. Selbst bis zu den ersten selbstfahrenden Autos wird es nicht mehr weit sein.

Diese Unterrichtseinheit bietet den Schülerinnen und Schülern die Möglichkeit, die Chancen und Gefahren künstlicher Intelligenz zu erarbeiten und in interaktiven Formen zu diskutieren.

Artificial Intelligence – Risks and benefits

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Competences and skills:

This unit contains texts and tasks that can be classified as level B2/C1 (*Gemeinsamer Europäischer Referenzrahmen*). By working with the materials, students enhance their **reading skills**. Furthermore, they practise their competences in **explaining** and **analysing** texts when working closely with the extracts of non-fictional and fictional materials. Students' **speaking** and **presentation skills** are improved through short presentations covering clear-cut topics. They demonstrate their **listening** and **viewing skills** by answering questions on the video. Other tasks (comment, characterisation) focus on **writing competence** and students' topic-related **vocabulary** knowledge.

Overview:

List of abbreviations:

A	Analysis	C	Comment
CT	Creative task	D	Discussion/debate
G	Group work	L	Language
LVC	Listening/viewing comprehension	M	Mind map/visualising
P	Working with a picture/cartoon	PR	Presentation
R	Research	RC	Reading comprehension
S	Summary	T	Working with a text
VI	Working with a video	W	Writing

Topic	Material	Methods/Skills
1: Getting started: AI – What is it all about?	M1	G, RC, W
2: Defining AI – Defining AI in 10 minutes	M2–M4	D, G, LVC, RC, W
3: Understanding the theory behind AI – Learning about the theoretical background	M5–M6	C, RC, T, W
4: AI and me – AI in our everyday life of the future	M7–M9	D, G, RC
5: Literary visions of the future	M10–M14	A, C, D, G, PR, RC, T, W

Artificial Intelligence – Risks and benefits

Facts

What would happen if ...? The chances and risks we take with Artificial Intelligence in our everyday lives! The 21st century is marked by a rapidly increasing reach of AI. In many areas of our daily routine, the efficiency of computers has opened opportunities that can be both a blessing and a curse. For instance, technology that is used in the field of medicine is not, anymore, a mere product of science fiction writers. The term “Artificial Intelligence” refers to the design of intelligent machines. We no longer wonder at robots that play chess well or that perfectly perform household chores. Also, robots that can produce human speech are nothing extraordinary to young people. Bearing in mind the immeasurable usefulness of this revolutionary development, we also need to consider the warnings and scrutinising voices of the critics. Finally, society must ask ethical questions like “Should a machine replace human decision making in crucial situations?” This unit familiarises students with different aspects of Artificial Intelligence and presents three extracts from a recent novel, *Klara and the Sun* by the British writer Kazuo Ishiguro, who won the Nobel Prize of Literature in 2017. By dealing with the materials, students develop an understanding of Artificial Intelligence which will enable them to weigh both the opportunities and the risks connected with this technology.

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Notes on the material

Topic 1 serves as an introduction to the topic *Artificial Intelligence*. Students will read several quotations about Artificial Intelligence. Then they are asked to classify the quotations to assess their implications. Next, they concentrate on one quotation that they consider worth discussing in smaller groups. Finally, a writing task invites students to work on a further quotation. They address its meaning, implications and relevance for society, thereby improving both the students’ speaking and writing competences.

Topic 2 deals with the definition and essence of Artificial Intelligence. At first, students are asked to work with a dictionary (either online or a print version) to understand

essential vocabulary that will come up in the *YouTube* video they will watch afterwards – several times, if necessary. Subsequently, they will answer five questions on the video’s content. The following task consists of reading the info box and doing the matching exercise using the vocabulary from the info box. The topic closes with the question about the future of science and technology. Here, teachers should ask and encourage students to use the information of the info box as well as the topic-related German/English vocabulary. Topic 2 will enhance students’ ability to process information by viewing and using the recently acquired specific vocabulary.

Topic 3 focuses on the theoretical background of Artificial Intelligence. For this purpose, a short extract from Ray Kurzweil’s *The Singularity Is Near* (2006) is presented. Ray Kurzweil (born in 1948) is an American author, futurist and head of the technological development at *Google LLC*. He is considered a pioneer of speech and facial recognition and was awarded the *National Medal of Technology and Innovation*. Students will finish several sentences referring to the extract’s content, thereby demonstrating their reading comprehension. After this, students select major statements from the text and, thus, go further in their understanding of the passage. Next, they each prepare a short presentation which they will give in small groups. The topic is rounded off when students work on a written task about the possible ethical dilemmas of Kurzweil’s view of the future. Here, students again receive the chance to improve their writing skills.

In **topic 4**, students are encouraged to reflect on AI in our everyday lives in the future. As a preparation, they are asked to draw a list comparing and contrasting their grandparents’ early lives with their own lives in the 21st century. In this context, several spheres of life must be considered. The aim of the task is to make students reflect upon both positive and negative impacts on their lifestyles. Then, students will exchange their findings with a partner. In a next step, students prepare a poster on the subject with a partner so that they can present it in a gallery walk. Finally, they will read a text from the Internet on automated driving. This material serves as a basis for a debate. If the students turn out not to be familiar with staging a debate, they can use the info sheet on how to do it.

In **topic 5**, students’ attention is directed towards the literary vision of the future when they read excerpts from Kazuo Ishiguro’s latest novel, *Klara and the Sun* (2021). The British writer of Japanese origin was awarded the Nobel Prize for Literature in 2017.

The novels *The Remains of the Day* and *Never Let Me Go* are two of his masterpieces. In *Klara and the Sun*, Ishiguro explores our rapidly changing modern world through the eyes of the android Klara as a most exceptional and remarkable narrator. Klara explores the question of loneliness and selfishness in a society marked by Artificial Intelligence. As an introduction, students explore the relationship between humans and androids/robots in a card survey. A further task consists of clustering and categorising the relationship, on which students will then assess their outlook on the future: will it be positive or negative? After this, students are confronted with the first extract from *Klara and the Sun* (Part 1). After having read the extract, students work with the text analysing both the narrator and the atmosphere of the novel. Finally, as a creative task, students reflect upon a possible continuation of the novel, which is supposed to direct their reading. Afterwards, part 2 is presented to the students, who again will work with the text outlining the situation Klara finds herself in. By doing so, they will demonstrate their text comprehension. Then, students analyse Josie's and Klara's relationship and, in a pair work activity, they once more think of a possible continuation of the story which they will tell their peers in smaller groups. As a final step, students will read the third extract from *Klara and the Sun* (Part 3). They are asked to describe Klara's situation at the end of the novel and analyse their impression of the female manager (Klara calls her *Manager*), followed by a characterisation of Klara. A written comment rounds off topic 5, focusing on the attitude of the society in the book towards intelligent robots with a sentient life. As a final and creative step, students prepare a discussion in which they represent the following roles: a moderator, the writer Kazuo Ishiguro, an IT-specialist, a psychologist, a teenager and a single mother. In this discussion, they deal with the following question, "Is our society fundamentally lonely and utterly selfish?" The role cards serve students as a basis and background for their contributions during the discussion. The most demanding position is probably Kazuo Ishiguro's part because it takes some research into the writer's general attitude.

Topic 1: Artificial Intelligence – What is it all about?

M1 Worksheet – Quotations about AI

Lead-in



1. Read the quotations about Artificial Intelligence in the grid below.

2. Classify each quotation as either positive, negative or neutral in its message.



3. Justify your decision. Make notes.

Quotations about Artificial Intelligence	Your notes (positive, negative, neutral)
<p>a) AI is likely to be either the best or worst thing to happen to humanity. (Stephen Hawking)</p>	
<p>b) We are not creative enough to make meaningful jobs out of nothing – and that's what we'll be left with when we give all the skilled labour and unskilled labour to machines. (A college professor)</p>	
<p>c) Artificial Intelligence is about replacing human decision making with more sophisticated technologies. (Falguni Desai)</p>	

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