

Unlocking the Infinite Possibilities of Generative AI for Teachers

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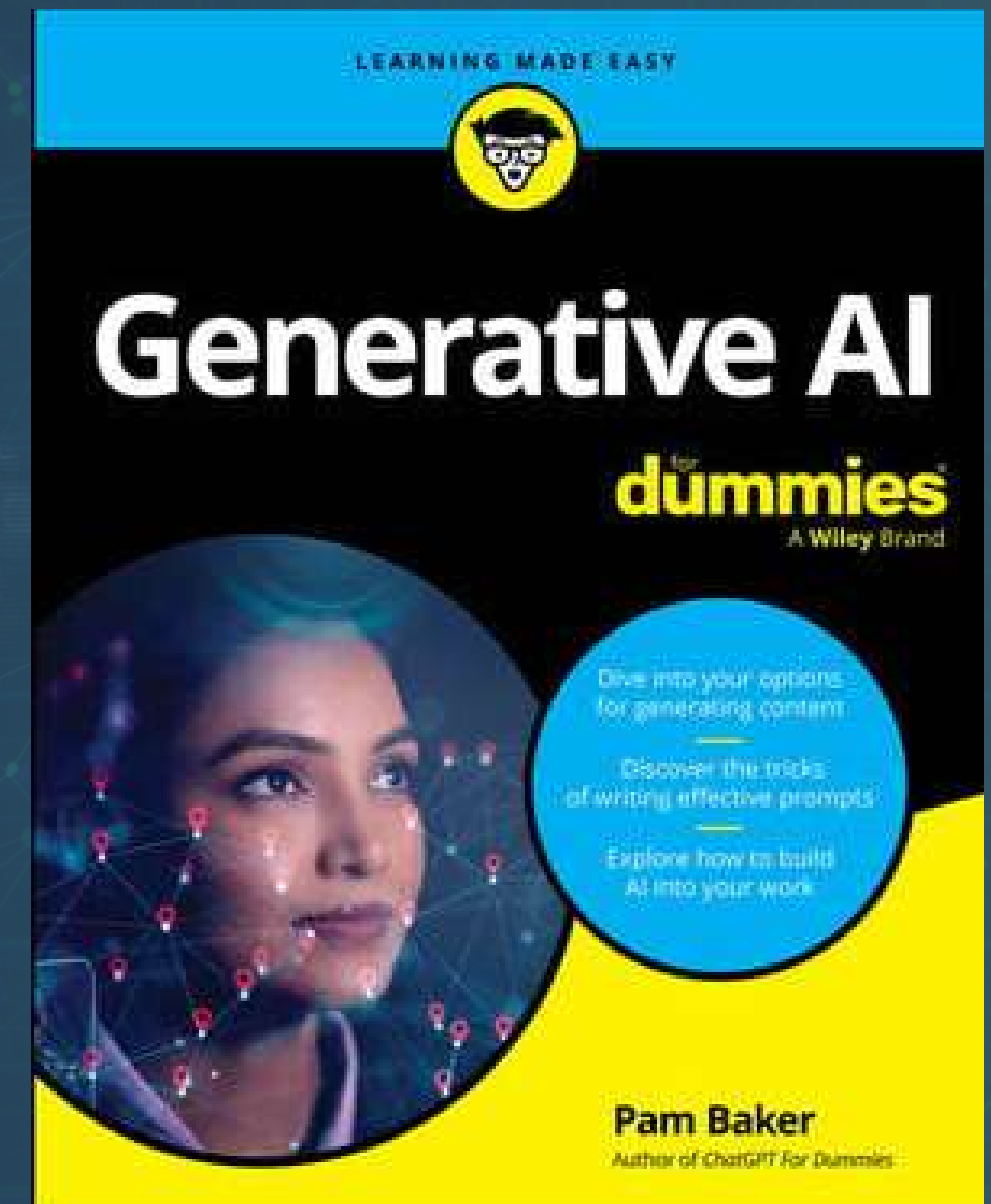


- What is GAI?
- Roles of GAI in Education
- Challenges
- Solution

GENERATIVE AI (GAI)



- “It (GenAI) belongs to a classification of AI called **Large Languages Models (LLM)**, which analyze huge amounts of data in numerous languages including human languages, computer code, math equations, and images.”
- “LLMs typically have a substantial number of parameters.”

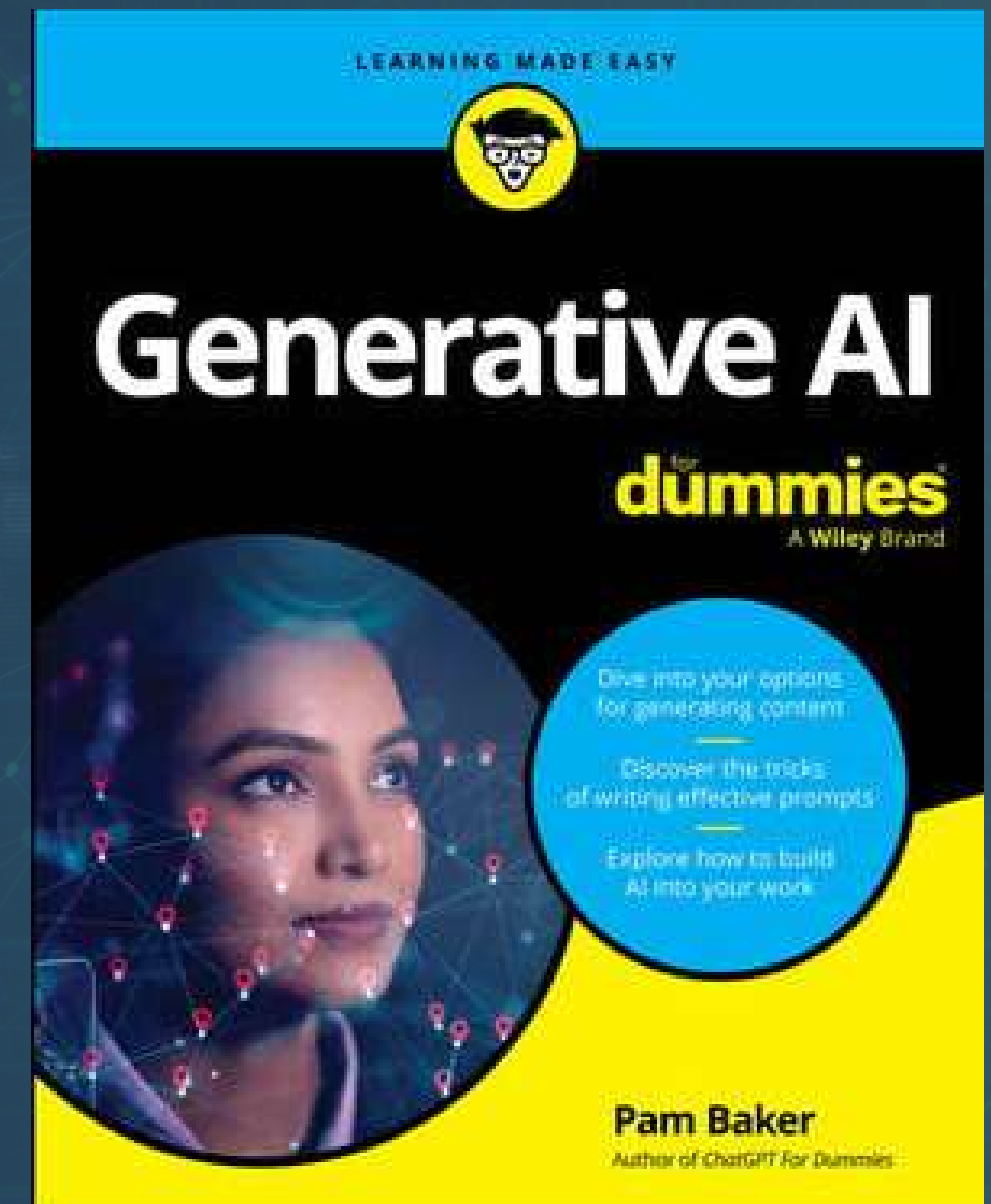


Generative AI For Dummies

GENERATIVE AI (GAI)

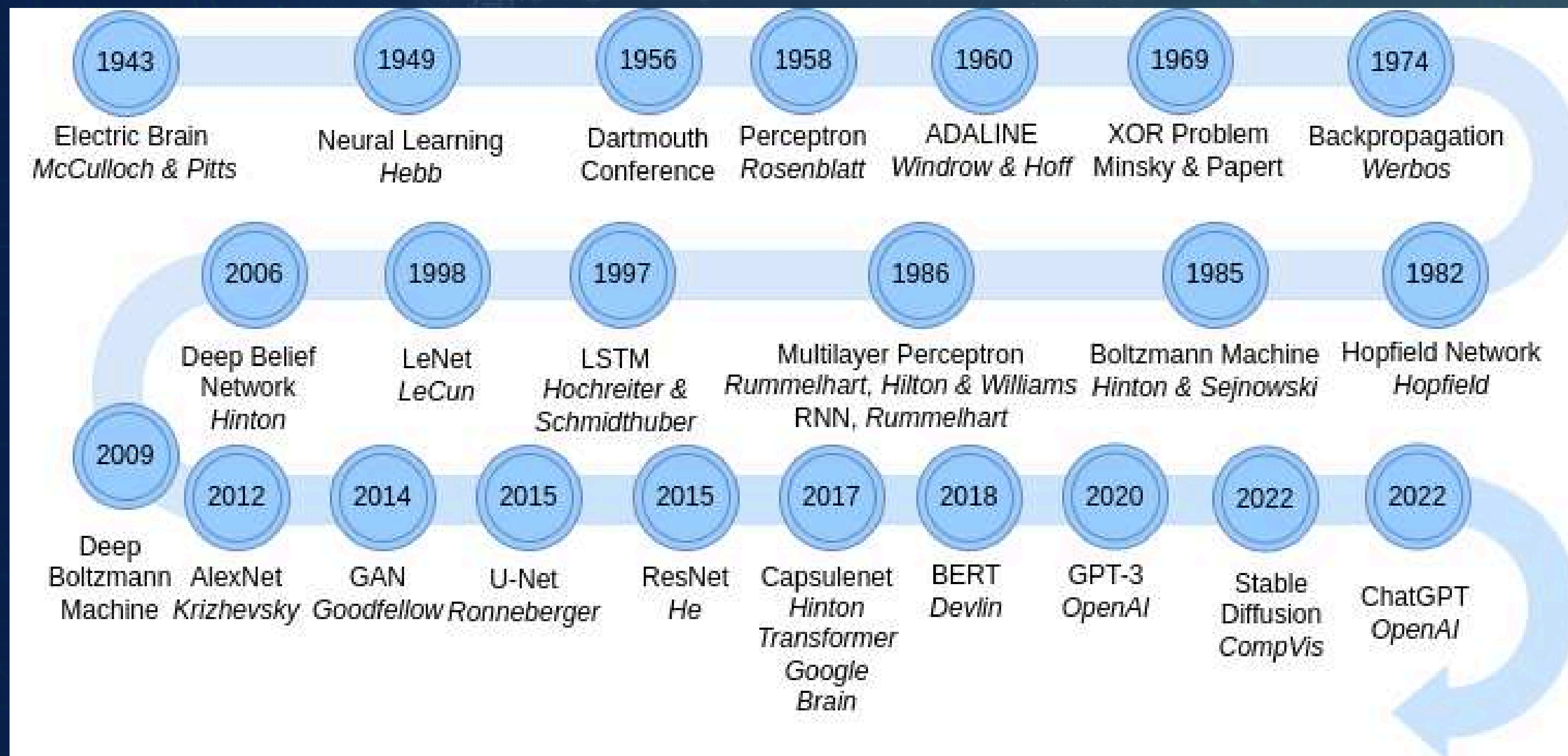


- “Imagine you have a recipe for making a cake, and the recipe is your GenAI model. The ingredients - like flour, sugar, eggs and butter - are like the data points, words, and connections in the model.”

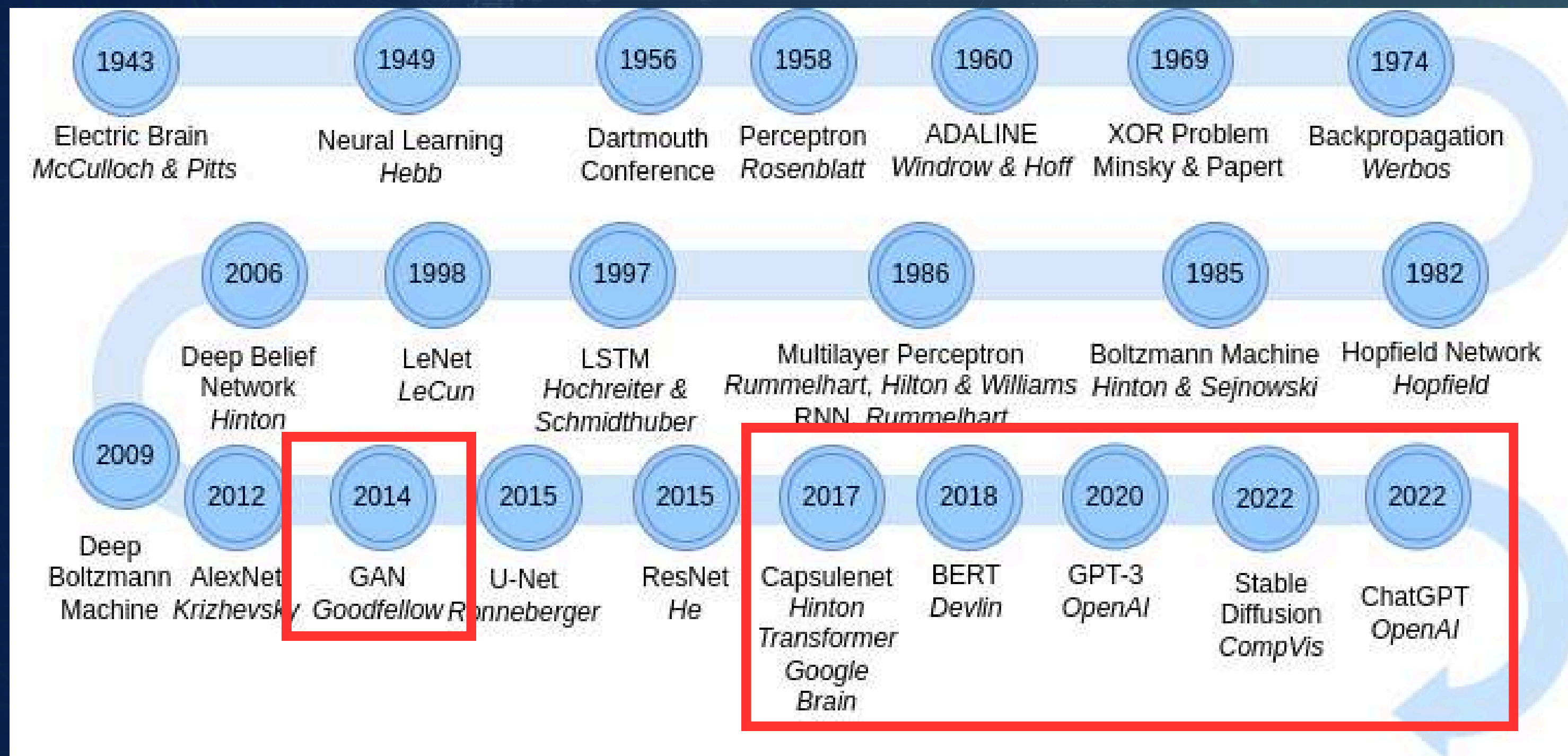


**Generative AI
For Dummies**

ROADMAP OF GAI



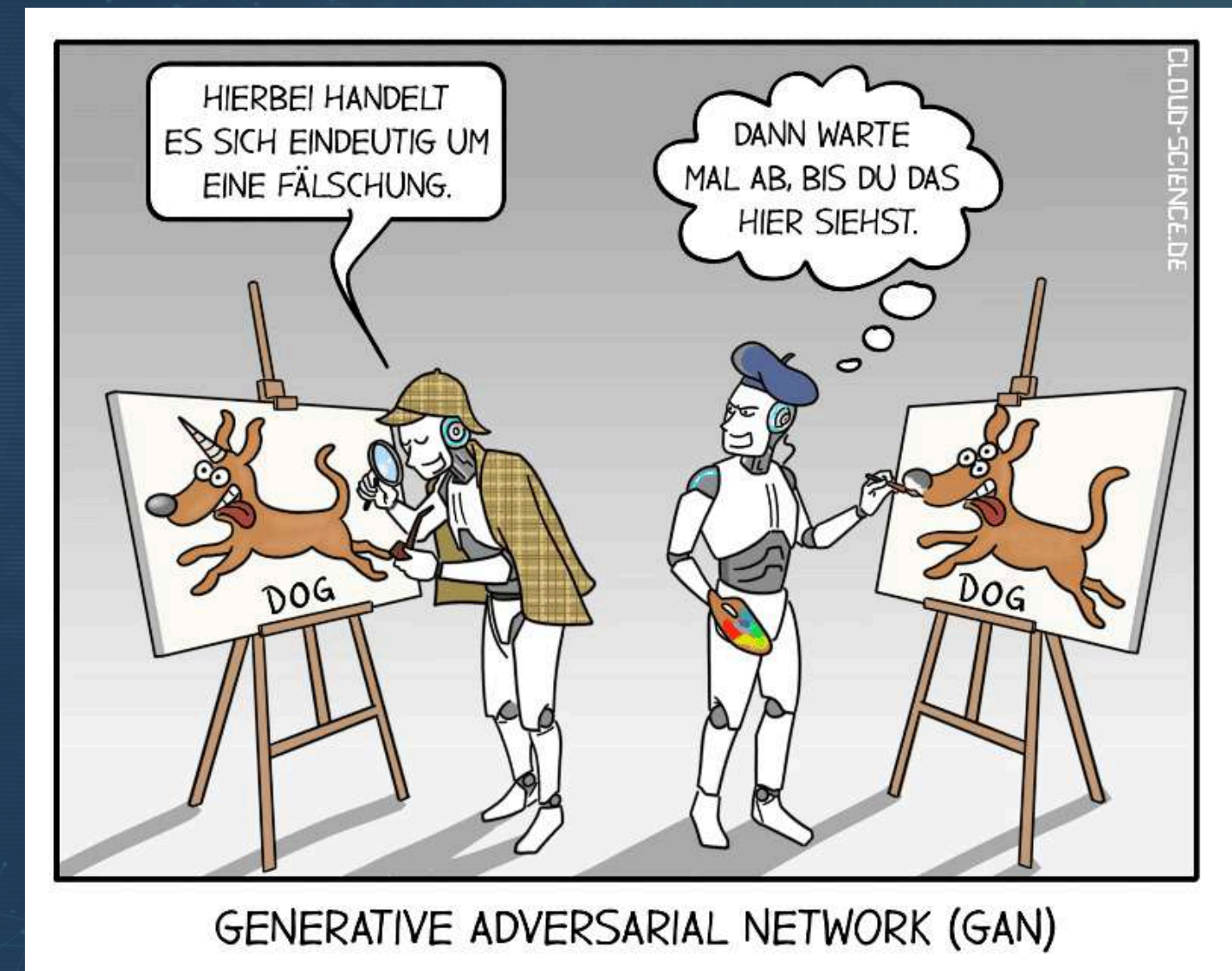
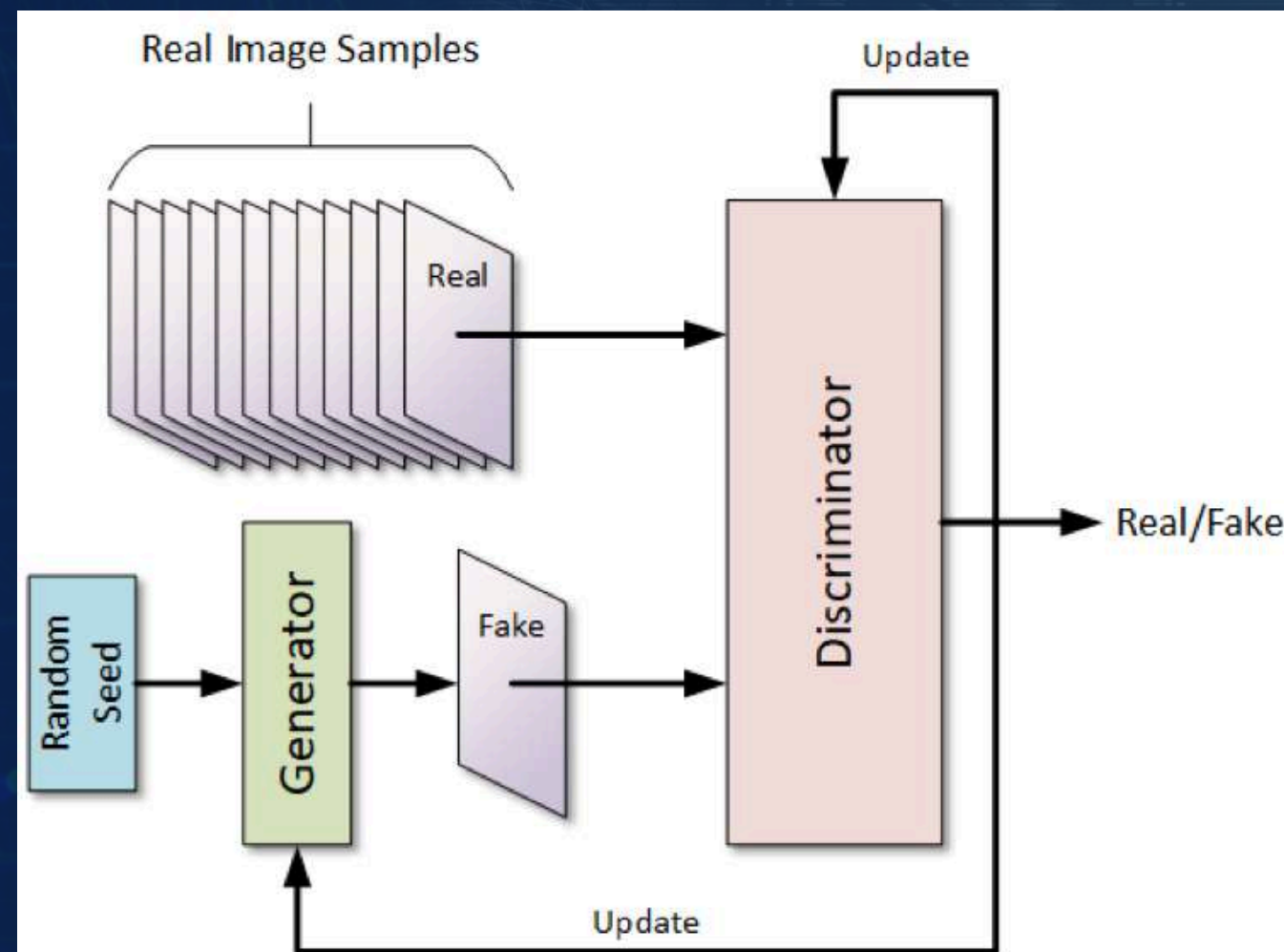
ROADMAP OF GAI



GENERATIVE ADVERSARIAL NETWORK (GAN) (2014)



- Generator & Discriminator

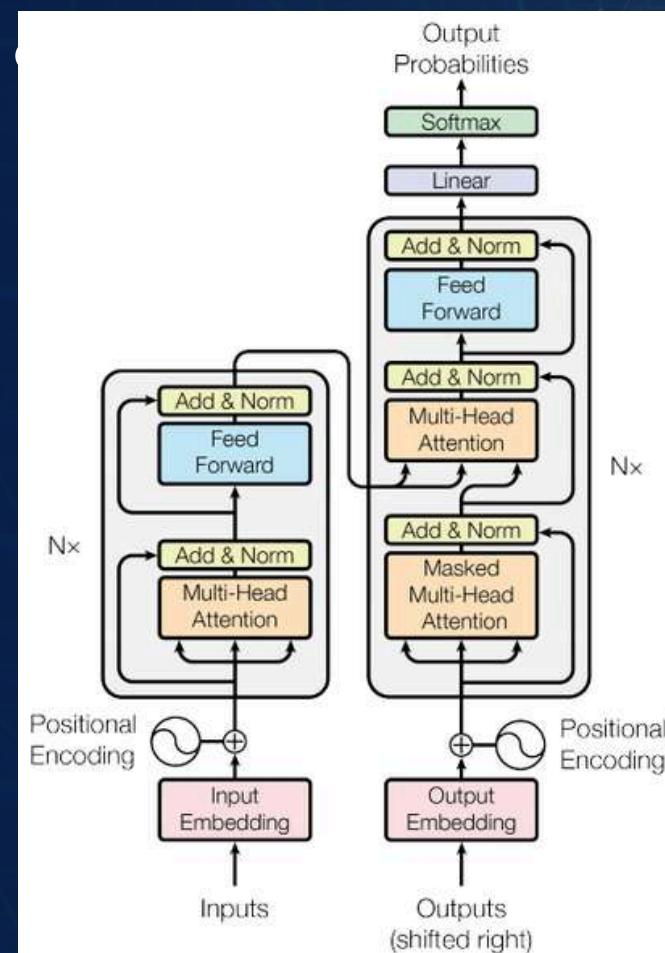


Source: Mirza, M., & Osindero, S. (2014). Conditional generative adversarial nets. arXiv preprint arXiv:1411.1784.

CHATGPT (2022)



- Generative
- Pre-trained
- Transformer



ChatGPT [Poe](#)

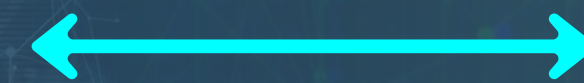
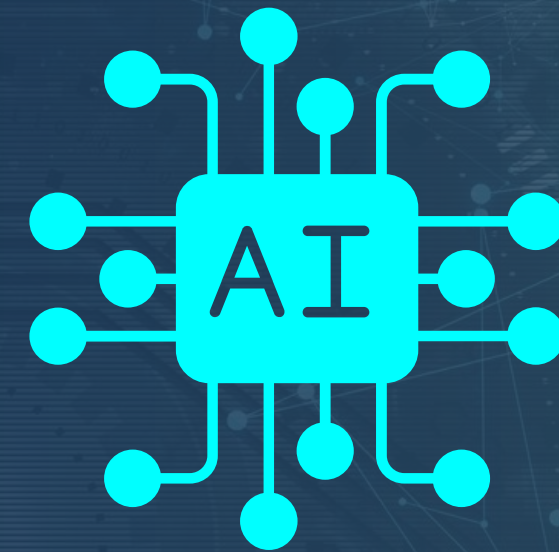
Certainly! Here's a concise list of functions for ChatGPT:

1. Language processing
2. Conversation generation
3. Question-answering
4. Knowledge retrieval
5. Text completion
6. Natural language understanding
7. Language translation
8. Sentiment analysis
9. Summarization
10. Recommendation systems

These functions cover the main capabilities of ChatGPT in understanding and generating human-like text, facilitating conversations, providing answers, retrieving information, and performing various language-related tasks.

ROLES OF GAI IN EDUCATION >>>>>>>>

- Individualized, Adaptive and Personalized Learning
- Improved Feedback and Assessment
- Increased Engagement of Students through Prompt-Based Interactions



Source: Kong, S. C., & Yang, Y. (2024). A Human-Centred Learning and Teaching Framework Using Generative Artificial Intelligence for Self-Regulated Learning Development through Domain Knowledge Learning in K-12 Settings. IEEE Transactions on Learning Technologies.



ROLES OF GAI IN EDUCATION >>>>>>>>

- An example:

My student is tasked with developing a web application to retrieve and display real-time bus arrival data, sourced from DATA.GOV.HK, at the school entrance for the benefit of other students.

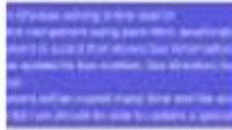


ROLES OF GAI IN EDUCATION >>>>>>>

- An example:

My student is tasked with developing a web application to retrieve and display real-time bus arrival data, sourced from DATA.GOV.HK, at the school entrance for the benefit of other students.

- HTML, JavaScript, CSS



Component
Chinese writing online search...
GPT-4o-Mini: Here's a complete HTML code block that creates a bus information card component using pure HTML, JavaScript, and CSS. This component can be
poe.com

First, I ask 4omini separately design bus information card and slide component separately and I will ask for amendment and changes. Once finalized the design, I ask 4omini to output a 說明書 of each component.

(The request for changes and amendments is skipped in the links)

1. Create bus card component
https://poe.com/s/EaalpkQ9tBpx2CJBaxx5?utm_source=link
2. Create better bus card component interface base on my sketch
https://poe.com/s/LRQnHgWxjhxLPfgVcULP?utm_source=link
3. Integrate new interface to old code
https://poe.com/s/myHmqIW5Bjl527sgvp9u?utm_source=link
4. Create slide component

ROLES OF GAI IN EDUCATION

- An example:
- My student is tasked with developing a web application to retrieve and display real-time bus arrival data, sourced from DATA.GOV.HK, at the school entrance for the benefit of other students.
- HTML, JavaScript, CSS

create a Description of the Bus Information Card with

- Component Overview
- Component Code (Interface Part with styling)
- JavaScript Function Description

Create a brief description to this component, including

1. The component code of interface part
2. The JavaScript function that can initialise the component
3. The JavaScript function that can turn the slide to next page
4. A brief description of the component and JavaScript function

Create a html component using pure html JavaScript css

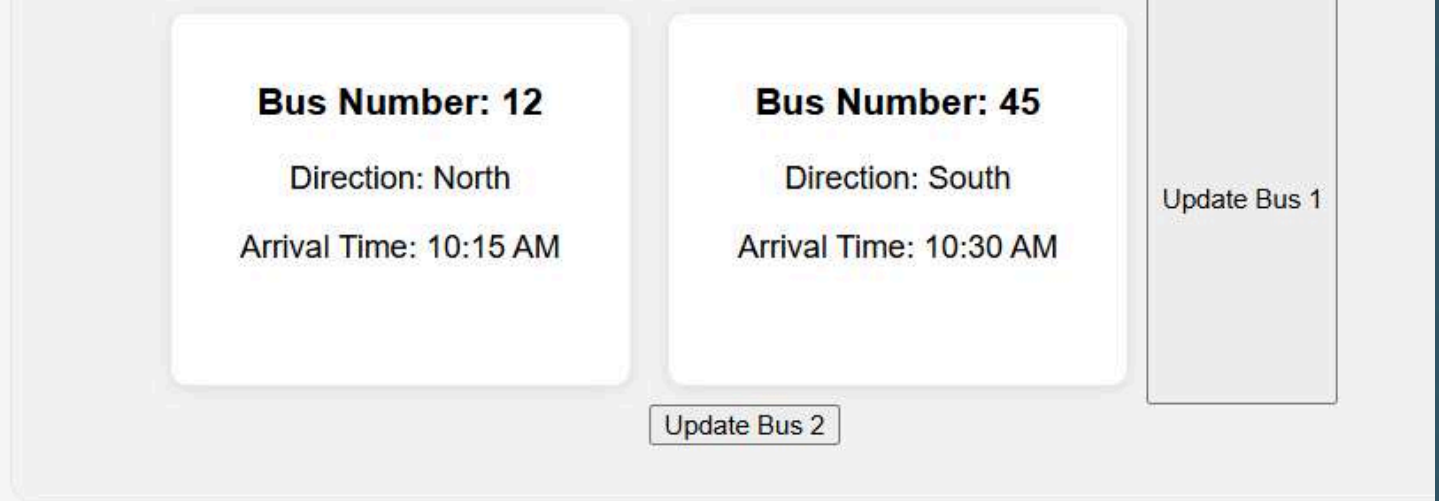
The component is a slides component, it contain n slide, where n can be configure as a parameter.

The slide component cannot be movies from one slide to another slide, instead, there is a JavaScript function which can move the slide into next slode

ROLES OF GAI IN EDUCATION



- An example:
- My student is tasked with developing a web application to retrieve and display real-time bus arrival data, sourced from DATA.GOV.HK, at the school entrance for the benefit of other students.
- HTML, JavaScript, CSS



Bus Number: 12
Direction: North
Arrival Time: 10:15 AM

Bus Number: 45
Direction: South
Arrival Time: 10:30 AM

Update Bus 1

Update Bus 2

Explanation:

- **HTML Structure:** There are two bus cards with unique IDs. Each card displays bus information such as number, direction, arrival time, and status.
- **CSS Styles:** The cards are styled to look presentable with a simple layout. The status colors are defined for "on-time," "delayed," and "updating."
- **JavaScript Function:** The `updateBusCard` function takes parameters to update the specific card's information. It updates the card based on the card's ID passed to it.



重新整理 新分頁

A46 | 9
往火炭(駿景園)

E42P | 0
往火炭(山尾街)

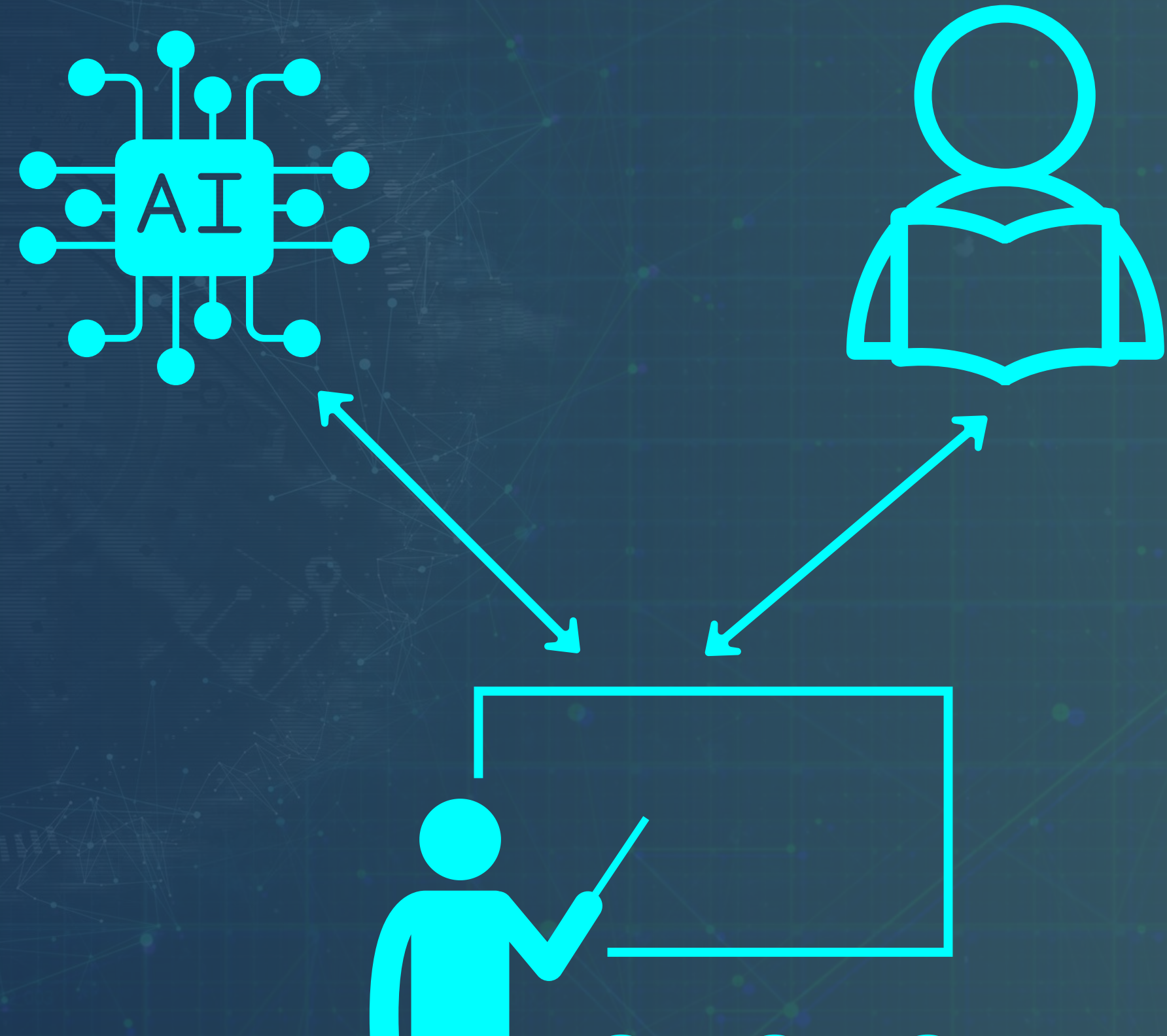
NA40 | 32
往烏溪沙站

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ROLES OF GAI IN EDUCATION >>>>>>>>

- Assessment Design
- Pedagogical Support
- Automated Administrative Duties



CHALLENGES WHEN INTEGRATING GAI INTO EDUCATION

- Uncertainty about appropriate applications
- Lack of access to adequate training and support



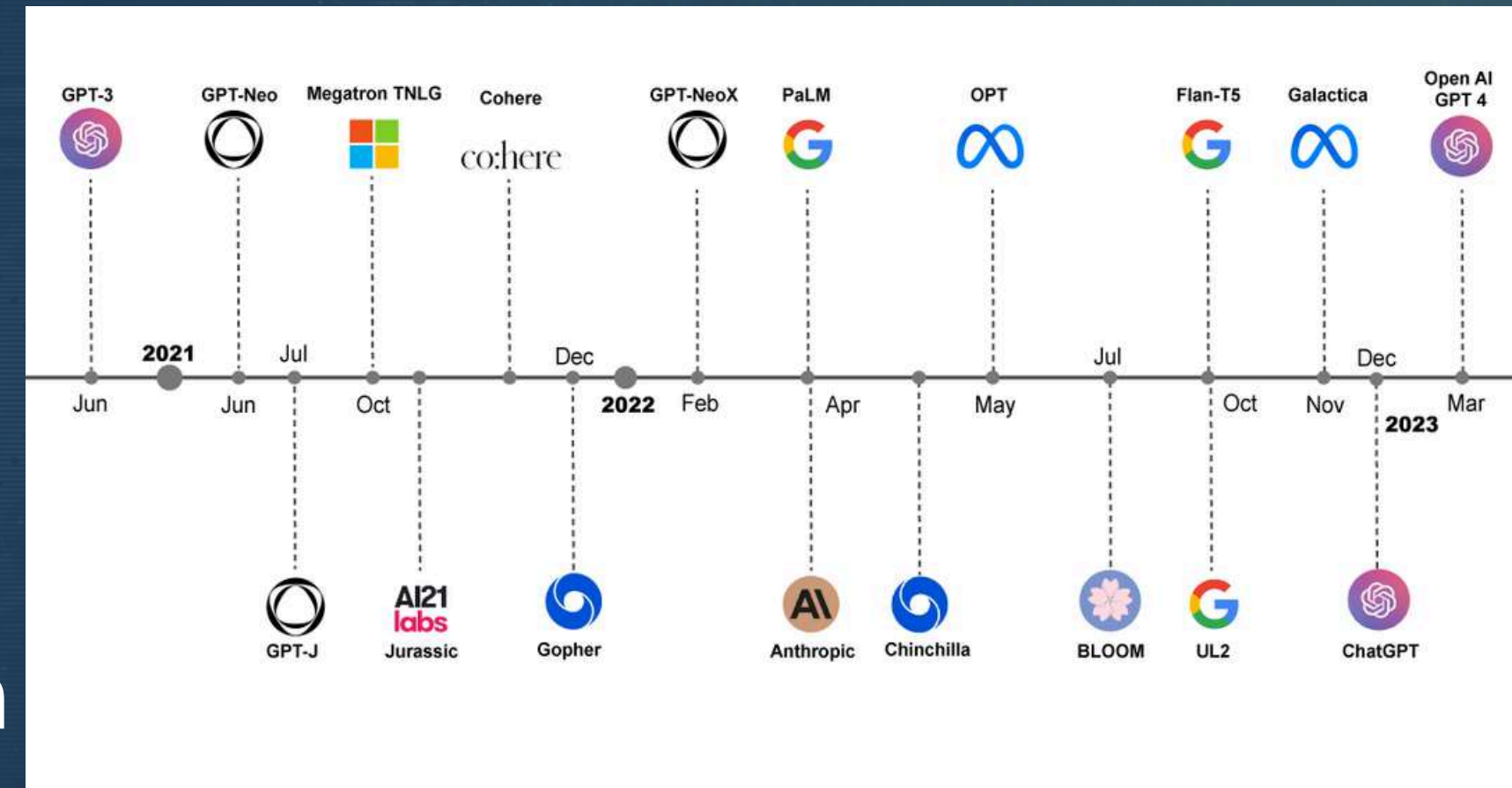
CHALLENGES WHEN INTEGRATING GAI INTO EDUCATION

- Uncertainty about appropriate applications
- Lack of access to adequate training and support



CHALLENGES WHEN INTEGRATING GAI INTO EDUCATION

- Uncertainty about appropriate applications
- Lack of access to adequate training and support
- Difficulty choosing an appropriate GAI model/platform



Source: <https://bakingai.com/blog/introducing-llmops-the-future-of-mlops-for-generative-ai/>

CHALLENGES WHEN INTEGRATING GAI INTO EDUCATION

- Uncertainty about appropriate applications
- Lack of access to adequate training and support
- Difficulty choosing an appropriate GAI model/platform
- Difficulty writing effective prompts

Prompt Structure

- ✦ **Intro:** Introduce role, broad context, and task, while **referencing** all further sections.
- ✦ **Sections:** Structure additional information and instructions in several sections.
- ✦ **Outro:** Repeat the main task by summarizing it in a few words.

Tip: Give each section a unique name and reference them specifically in the intro.

Prompt:
You're a **professional copywriter** in the **B2B space**. Your task is to write a LinkedIn post about the future of AI, strictly following the **instructions** below.

***** Instructions *****

- Use a conversational tone of voice.
- Write short sentences.
- End with call-to-action to a free trial.

Now write the LinkedIn post:

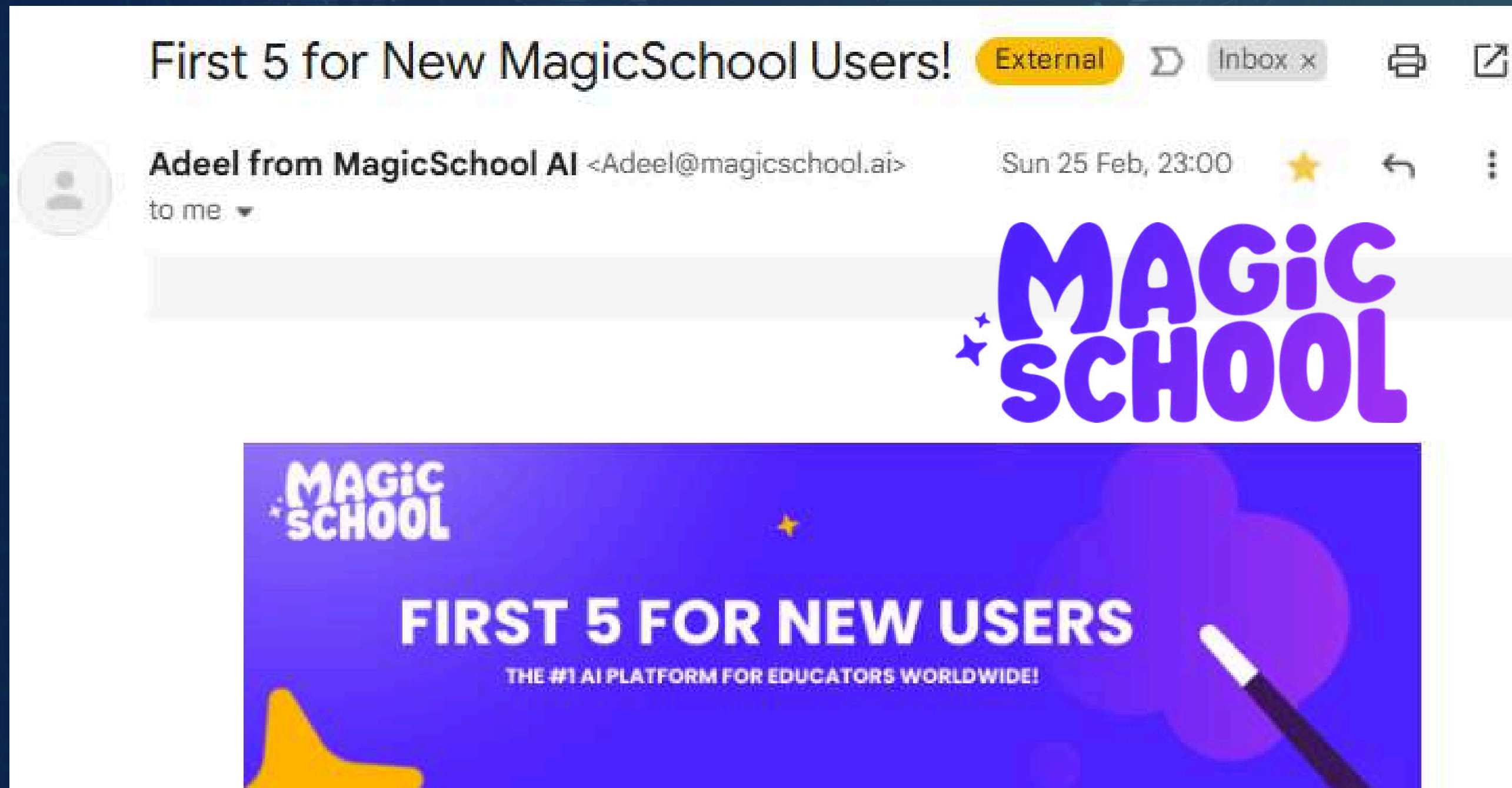
promptitude.io

The easiest & fastest way to integrate GPT into your apps & workflows.

Source: <https://www.promptitude.io/post/prompt-engineering-101-the-ultimate-guide-to-mastering-prompting-for-beginners>

CHALLENGES WHEN INTEGRATING GAI INTO EDUCATION

- Solution:



BECOMING ETHICAL USERS OF GAI

- Respect intellectual property rights
- Professional judgement
- Protection of privacy



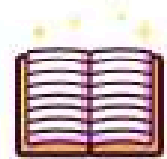
Source:
<https://www.info.gov.hk/gia/general/202305/24/P2023052400284.htm?fontSize=1>

MAGiC SCHOOL



USEFUL TOOLS

Favorites [Change Order](#)



Vocabulary Based Texts

Generate original texts for your class that include a custom list of...



YouTube Video Questions

Generate guiding questions aligned to a YouTube video.



Worksheet Generator

Generate a worksheet based on any topic or text.



Lesson Plan

Generate a lesson plan for a topic or objective you're teaching.



Common Misconceptions

Generate the most common misconceptions and how to address...



Multiple Explanations

Generate clear explanations of concepts that you're teaching in...



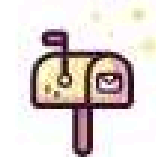
Professional Email

Generate a professional e-mail communication to colleagues and...



Report Card Comments

Generate report card comments with a student's strengths and areas for...



E-mail Responder

Generate a customized professional e-mail communication in response ...



Letter of Recommendation

Generate a letter of recommendation to a university or institution for a...



Survey Creator NEW

Create a survey to collect information or solicit feedback.



HOW CAN MAGICSCHOOL'S AI HELP TEACHERS?

Assessment Design



Vocabulary Based
Texts



YouTube Video
Questions



Worksheet
Generator

Pedagogical Support



Lesson Plan



Common
Misconceptions



Multiple Explanations

Administrative Duties



Professional Email/
Email Responder



Report Card
Comments



Survey
Creator



Letter of
Recommendation

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?



Vocabulary Based Texts

 Clear Inputs

 Exemplar

Vocabulary Based Texts

Generate original texts for your class that include a custom list of vocabulary to help practice words in context.

Grade level:

8th grade 

Text Length:

1 paragraph 

Vocabulary to include:

 Itinerary
Destination
 Expedition
Accommodation
Tourist
Transport
Backpacker
Sightseeing
Exploration

Topic of Text:

 Travelling


Generate

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?



Vocabulary Based Texts

Clear Inputs Exemplar

Vocabulary Based Text

Generate original texts for your class that include a c
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Grade level:

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Topic of Text:

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Generate

Vocabulary Based Texts

Edit Prompt

The Adventure of Traveling

Vocabulary Words Included: Itinerary, Destination, Expedition, Accommodation, Tourist, Transport, Backpacker, Sightseeing, Exploration, Ecotourism, Passport Control, Souvenir, Jet Lag

Traveling can be an exciting adventure that involves careful planning and exploration. When preparing for a trip, it's important to create an itinerary that outlines your destination and activities. Many travelers choose to go on an expedition to discover new cultures and landscapes. Finding the right accommodation is essential, whether you're a backpacker looking for budget-friendly hostels or a tourist seeking luxury hotels. Efficient transport is necessary to move between sights, allowing for ample sightseeing during your journey. Ecotourism is becoming increasingly popular, encouraging travelers to explore nature while being mindful of their impact on the environment. Before you board a flight, you'll need to go through passport control to ensure all travel documents are in order. After arriving, some travelers experience jet lag, which can make adjusting to a new time zone challenging. A memorable trip often includes bringing back a souvenir to remind you of the incredible places you visited.

Copy Edit Export Read Aloud More



Can you provide examples of itineraries for different types of trips?

What activities can help students learn about ecotourism?

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?

 Clear Inputs

 Exemplar

 Hide Prompt 



YouTube Video Questions

Generate guiding questions aligned to a YouTube video.

**YouTube Video
Questions**

Grade level:

10th grade

Question Type:

True or False

Number of Questions:

5

Video URL: 

<https://www.youtube.com/watch?v=CMiPYHNNg28>

Generate

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?

Clear Inputs

Exemplar

Hide Prompt



YouTube Video Questions

Generate guiding questions aligned to a YouTube video.

YouTube Video Questions

Grade level:

10th grade

Question Type:

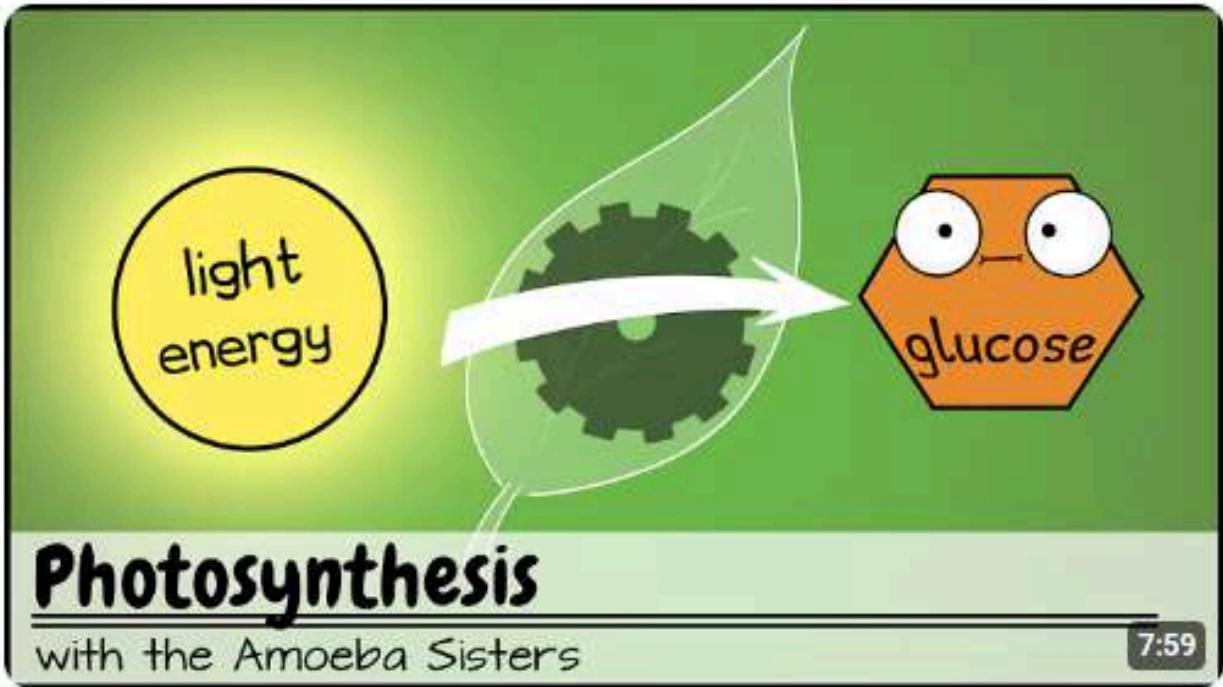
True or False

Number of Questions:

5

Video URL:

<https://www.youtube.com/watch?v=CMiPYHNNg28>



Photosynthesis (UPDATED)

3.6M views • 3 years ago

Amoeba Sisters

Explore one of the most fascinating processes

Subtitles High school

8 chapters Intro | Why does p

Generate

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?

YouTube Video Questions

 Edit Prompt 

Plant Photosynthesis Comprehension Questions

1. True or False: Humans have the ability to photosynthesize.
2. True or False: The process of photosynthesis produces oxygen, which is beneficial for animals.
3. True or False: Chlorophyll absorbs green light effectively, which is why plants appear green.
4. True or False: The light dependent reactions of photosynthesis occur in the stroma of the chloroplasts.
5. True or False: Cacti can open their stomata at night to capture carbon dioxide to conserve water during hot days.

Answer Key:

1. False (00:00:22)
2. True (00:00:36)
3. False (00:02:20)
4. False (00:03:26)
5. True (00:07:08)

plar

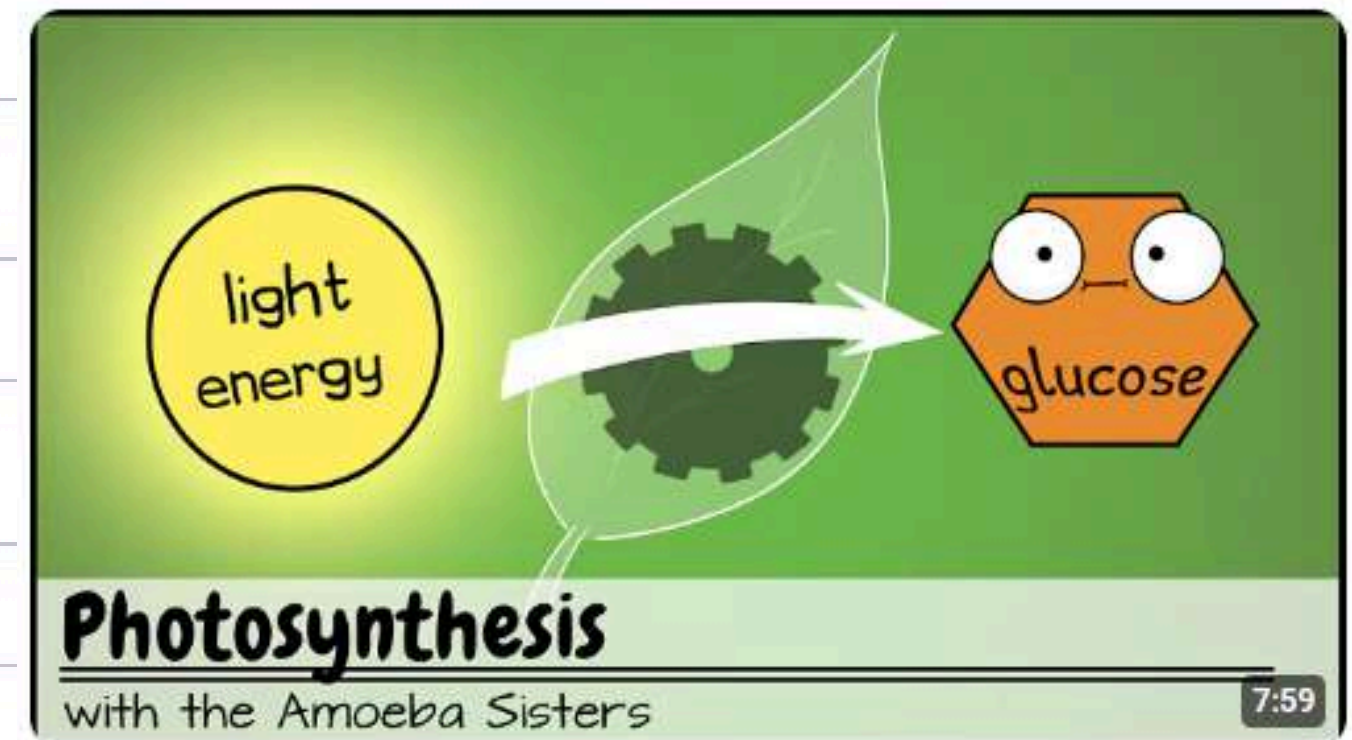
 Hide Prompt 



YouTube Video Questions

YouTube Video Questions

ing questions aligned to a YouTube video.



CMiPYHNNg28

Generate

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?

YouTube Video Questions

 Edit Prompt 

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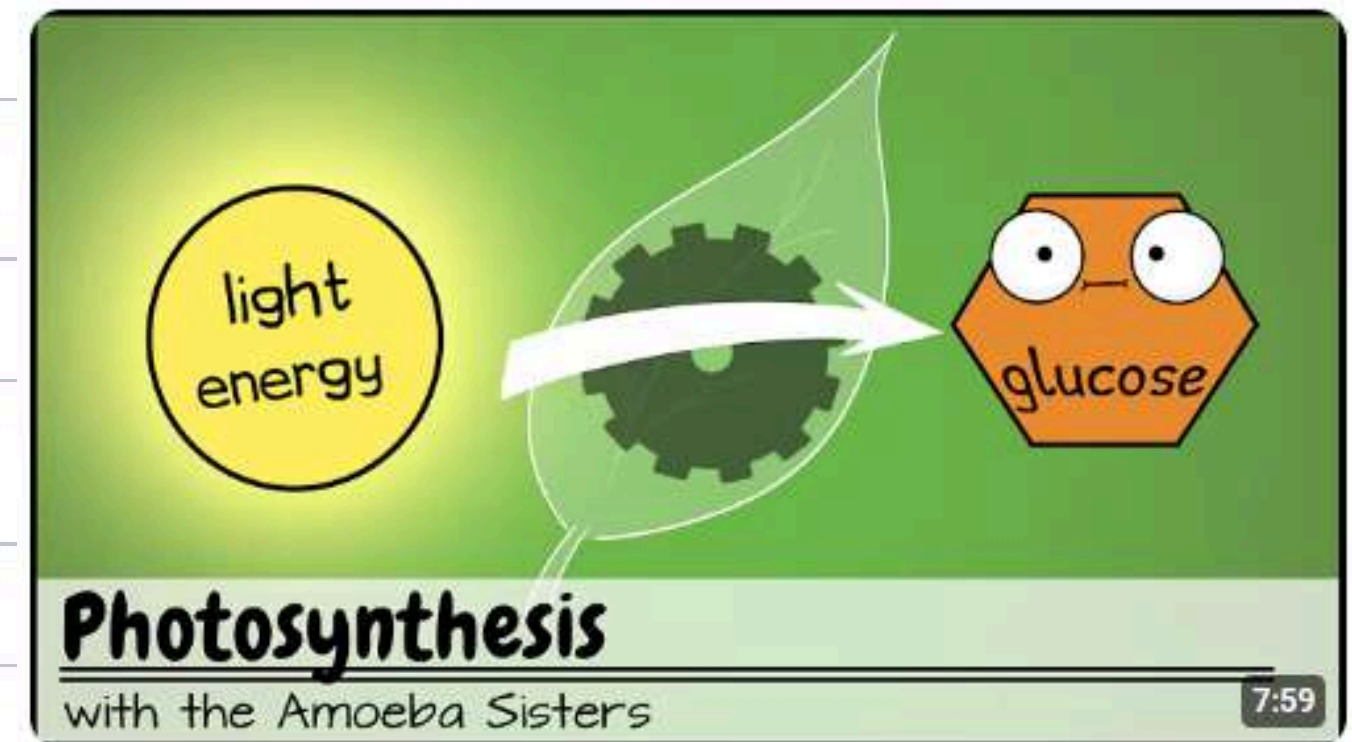
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YouTube Video Questions

YouTube Video Questions

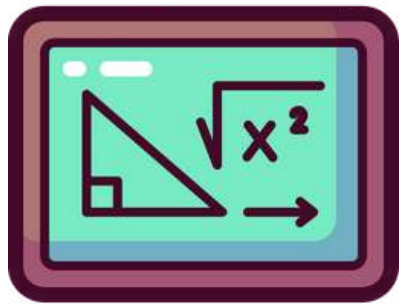
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CMiPYHNNg28

Generate

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?

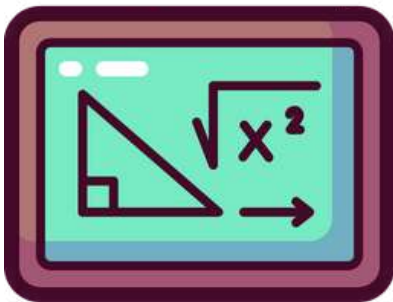


Lesson Plan

Topic & enquiry questions	Learning points	Suggested guiding questions	Suggested historical skills	Periods
<p>9. International conflicts and crises in the 20th century (I) – the two world wars</p> <p>- What did people learn from the two world wars?</p>	<ul style="list-style-type: none">• Relations among countries in Europe, America and Asia and reasons for their conflicts before the two world wars• Decolonisation of Asia and Africa, and the rise of the “Third World” in the post-war period• Case study (Choose 1 out of 2, study one more case for the extended part*):<ul style="list-style-type: none">- Wars and inventions: the total war, new military warfare, and other inventions (e.g. medicine and daily necessities, etc.)- Genocide: using the Holocaust as an example	<ul style="list-style-type: none">• What were the causes for the outbreak of the two world wars?• Was the Second World War a continuation of the First World War?• How did the two world wars change the international situation?• How did the two world wars change the mode of wars? What are the wartime inventions that have subsequently become our daily necessities?• What is Genocide? Why were the Jews massacred by the Nazi? What reflections did the Germans have in the post-war period? How can we avoid making the same mistake?	<ul style="list-style-type: none">✓ Analyse change and continuity✓ Analyse the turning point of history✓ Induce the characteristics✓ Understand different interpretations of major historical issues✓ Analyse how historical events connects with daily lives	18

* The extended part

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?



Lesson Plan

Lesson Plan

Generate a lesson plan for a topic or objective you're teaching.

Grade level:

9th grade

Topic, Standard, or Objective:

World War Two

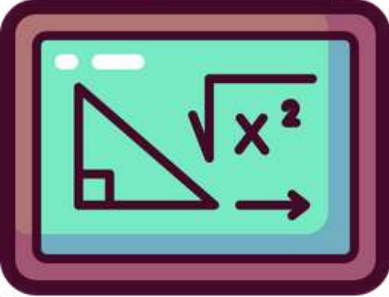
Additional Criteria:

group discussion, video

Generate

	Suggested guiding questions	Suggested historical skills	Periods
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HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?



Lesson Plan

Lesson Plan

Generate a lesson plan for a topic or objective you're teaching

Grade level:

9th grade

Topic, Standard, or Objective:

World War Two

Additional Criteria:

group discussion, video

Generate

Lesson Plan

[Edit Prompt](#)

Exploring World War Two: Causes and Consequences

Objective: Students will be able to analyze the major causes and consequences of World War Two and articulate their significance in a group discussion.

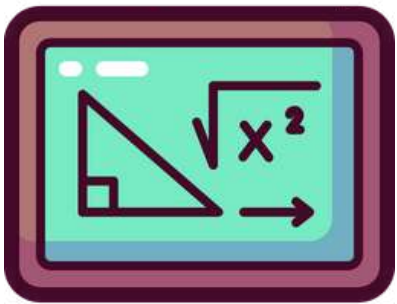
Assessment:

Students will participate in a group discussion where they will present their analysis of the causes and consequences of World War Two, demonstrating their understanding through the use of evidence and examples.

Key Points:

- **Causes of World War Two:**
 - Treaty of Versailles impact
 - Rise of totalitarian regimes (e.g., Hitler in Germany, Mussolini in Italy)
 - Economic factors (Great Depression)
- **Major Events of the War:**
 - Key battles and strategies (e.g., Battle of Britain, Pearl Harbor)
- **Consequences of World War Two:**
 - Establishment of the United Nations
 - Changes in global power dynamics
 - The beginning of the Cold War

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?



Lesson Plan

Lesson Plan

Generate a lesson plan for a topic or objective you're teaching

Grade level:

9th grade

Topic, Standard, or Objective:

 World War Two



Additional Criteria:

 group discussion, video



Generate

Opening:

- Begin with a thought-provoking question: "What do you think were the most significant factors that led to World War Two?"
- Show a short video clip (3-5 minutes) highlighting key events leading up to the war.
- Facilitate a brief discussion on students' initial thoughts about the video.

Introduction to New Material:

- Present key points using a combination of lecture and visual aids (slides, maps, etc.).
- Encourage students to take notes and ask questions throughout the presentation.
- **Common Misconception:** Some students may believe that World War Two was solely caused by the actions of Germany; emphasize the multifaceted nature of the causes.

Guided Practice:

- Provide students with a graphic organizer to map out the causes and consequences of World War Two.
- Break students into small groups to discuss specific events or factors and how they relate to the overall causes and consequences.
- Scaffold questioning:
 - Start with "What was the Treaty of Versailles?"
 - Progress to "How did the economic conditions contribute to the war?"
- Monitor student discussions by circulating the room and providing support as needed.

Independent Practice:

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?

 Clear Inputs

 Exemplar



Common Misconceptions

Common Misconceptions

Generate the most common misconceptions and how to address them on any topic.


Grade level:

9th grade

▼

What You Are Teaching:

 Integrated Science: Energy changes



⌵

Generate

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?



Common Misconceptions

address them on

- The major learning elements of the Science Education curriculum are arranged into six strands:
 - Scientific Investigation
 - Life and Living
 - The Material World
 - Energy and Change
 - The Earth and Beyond
 - Science, Technology, Society and Environment (STSE)

What You Are Teaching:



Integrated Science: Energy changes



Generate

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?

Misconception 1: Energy is only found in moving objects.

How to address this misconception:
Introduce the concept that energy exists in different forms, including potential energy (stored energy) and kinetic energy (energy of motion). Use everyday examples, such as a stretched rubber band (potential energy) and a rolling ball (kinetic energy), to illustrate how energy can be stored and transferred. Engage students in hands-on activities where they can observe and categorize various forms of energy.

Misconception 2: Energy can be created or destroyed.

How to address this misconception:
Teach the law of conservation of energy, which states that energy cannot be created or destroyed but can only change forms. Use experiments to demonstrate energy transformation, such as converting chemical energy in food to kinetic energy in movement. Encourage students to share real-life examples of energy transformations, reinforcing the concept through discussion and exploration.

Misconception 3: Heat is not a form of energy.

How to address this misconception:
Explain that heat is a form of energy transfer that occurs due to temperature differences. Use visual aids and interactive demonstrations, such as heating water and observing temperature changes, to show how heat energy is transferred. Discuss everyday scenarios where heat energy plays a role, like cooking or warming hands, to make the concept relatable and tangible.

Exemplar

Common Misconceptions

Common misconceptions and how to address them on any topic.



Common Misconceptions



Energy changes

Generate

HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?



Survey Creator

 Exemplar

 Hide Prompt ^

Survey Creator

Create a survey to collect information or solicit feedback.

Grade level:

Professional Staff

▼

Number of Questions:

5

▼

Topic of Survey:

 Staff Development Day Feedback



HOW TO NAVIGATE THE MAGICSCHOOL PLATFORM?



Survey Creator

Exemplar

Hide

Survey Creator

Create a survey to collect information or solicit feedback

Grade level:

Professional Staff

Number of Questions:

5

Topic of Survey:

Staff Development Day Feedback



Staff Development Day Feedback

1. The content of the Staff Development Day was relevant to my role.
5 - Strongly Agree
4 - Agree
3 - Neutral
2 - Disagree
1 - Strongly Disagree
2. The presentations and workshops were engaging and informative.
5 - Strongly Agree
4 - Agree
3 - Neutral
2 - Disagree
1 - Strongly Disagree
3. I feel more equipped to apply what I learned during the Staff Development Day.
5 - Strongly Agree
4 - Agree
3 - Neutral
2 - Disagree
1 - Strongly Disagree
4. The time allocated for each session was appropriate.
5 - Strongly Agree
4 - Agree
3 - Neutral
2 - Disagree
1 - Strongly Disagree
5. I would recommend future Staff Development Days to my colleagues.
5 - Strongly Agree
4 - Agree
3 - Neutral

HOW CAN MAGICSCHOOL'S AI HELP TEACHERS?

Assessment Design



Vocabulary Based
Texts



YouTube Video
Questions



Worksheet
Generator

Pedagogical Support



Lesson Plan



Common
Misconceptions



Multiple Explanations

Administrative Duties



Professional Email/
Email Responder



Report Card
Comments



Survey
Creator



Letter of
Recommendation

HOW CAN MAGICSCHOOL'S AI HELP TEACHERS?

Professional Development Resources

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PD Resources

Bringing MagicSchool AI to your school? Interested in how to use MagicSchool in your classroom? Explore our free Community Resources below.



CERTIFICATION COURSES
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Professional Development
SLIDES, LESSON PLANS, AND RESOURCES
FOR EDUCATORS AND STUDENTS!

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35K+ AI EMPOWERED TEACHERS

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TUTORIALS + TOOLKITS FOR EVERY EDUCATOR



PD PACK REQUEST FORM
MAGICSWAG KIT AND PD PACK



BECOME AN AI PIONEER
MAGICSCHOOL AMBASSADORS PROGRAM

CHALLENGES WHEN INTEGRATING GAI INTO EDUCATION

- Uncertainty about appropriate applications
- Lack of access to adequate training and support
- Difficulty choosing an appropriate GAI model/platform
- Difficulty writing effective prompts





Artificial Intelligence is not a **substitute** for *human intelligence*; it is a tool to **amplify** *human creativity and ingenuity*.



THANK YOU

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