

AI

**Build Your
School or
District
Strategy Now**

What AI are we discussing today?



Generative AI



Generative AI: Tools that create text, images, code, and sound based on vast datasets.

Generative AI tools such as Bard, Bing, and ChatGPT, are trained on massive amounts of data to recognize patterns and relationships between words, images, sounds and code. They use that understanding to generate brand-new, original, often creative outputs customized to the prompts users provide.

“Generative AI professional example for a slide deck presentation” prompt. Bing Chat, Microsoft, 3 Oct. 2023

What is Generative AI?

AI is:

NOT:

- Online and in-store shopping
- Robotic tractors, precision agriculture
- Warehouse Fulfillment
- Credit Card Fraud Protection
- Insurance Rates
- NASA images from space
- Text to Speech
- Foreign Language Translation
- Mapping and Navigation

It is in all of our lives and industries.

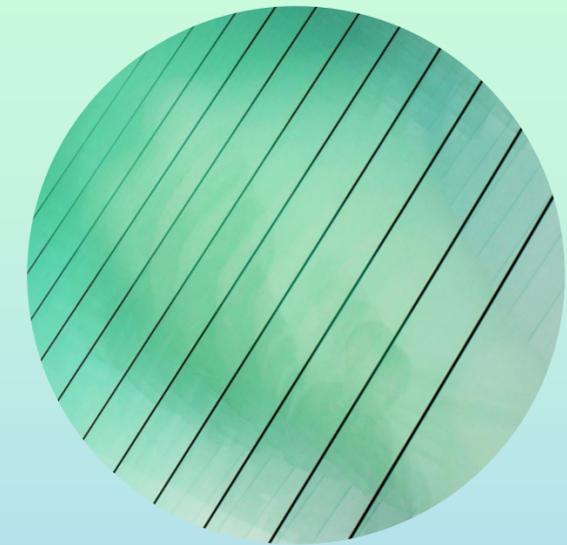
- Alive
- Smarter than us
- Killer robots
- Only for geniuses
- Only for people in tech cities
- Always physical. It is inside our computer software and phone apps.

And it is not going away.

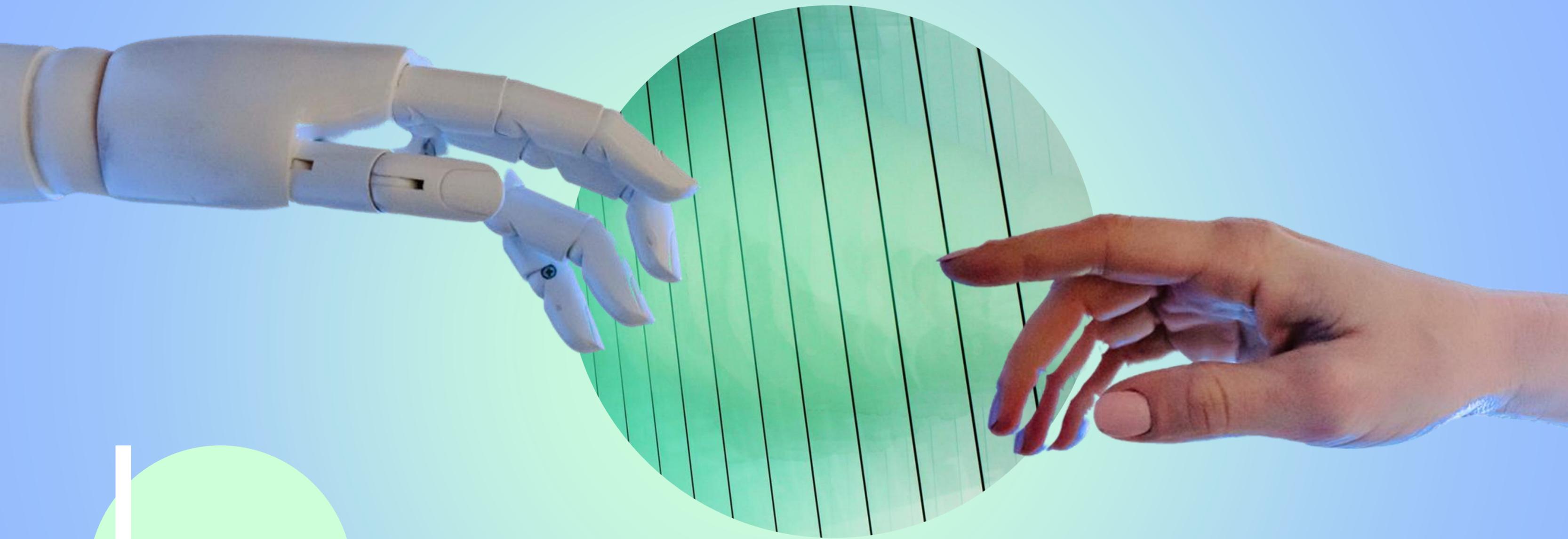
AI is

Education with AI

IS



- **IS NOT** Personalized learning: More practice problems for struggling students, more advanced concepts for students who are ahead
- Differentiation in seconds
- Increased student persistence
- Handwriting conversion to digital
- Text to speech, speech to text
- Language Translation
- Replacing teachers
- Going to solve every problem
- One more thing that needs to take a lot of time for busy educators
- Another subject that must be separate from Computer Science



The First Wave

Data recommendation engines



The Second Wave

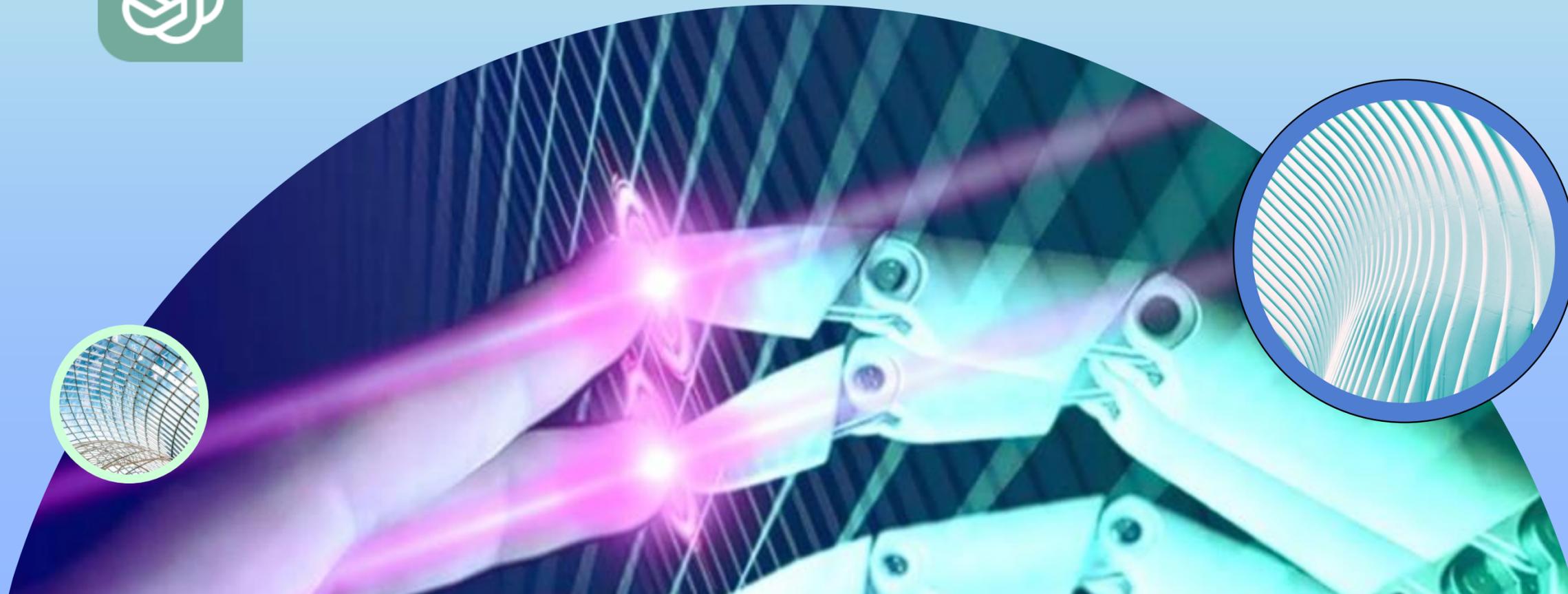
“Game Changing AI”

Google Searches leading to hyperlinks
(old)



VS

GPT chatting back plausible ANSWERS, with refinement
(Creating something new)



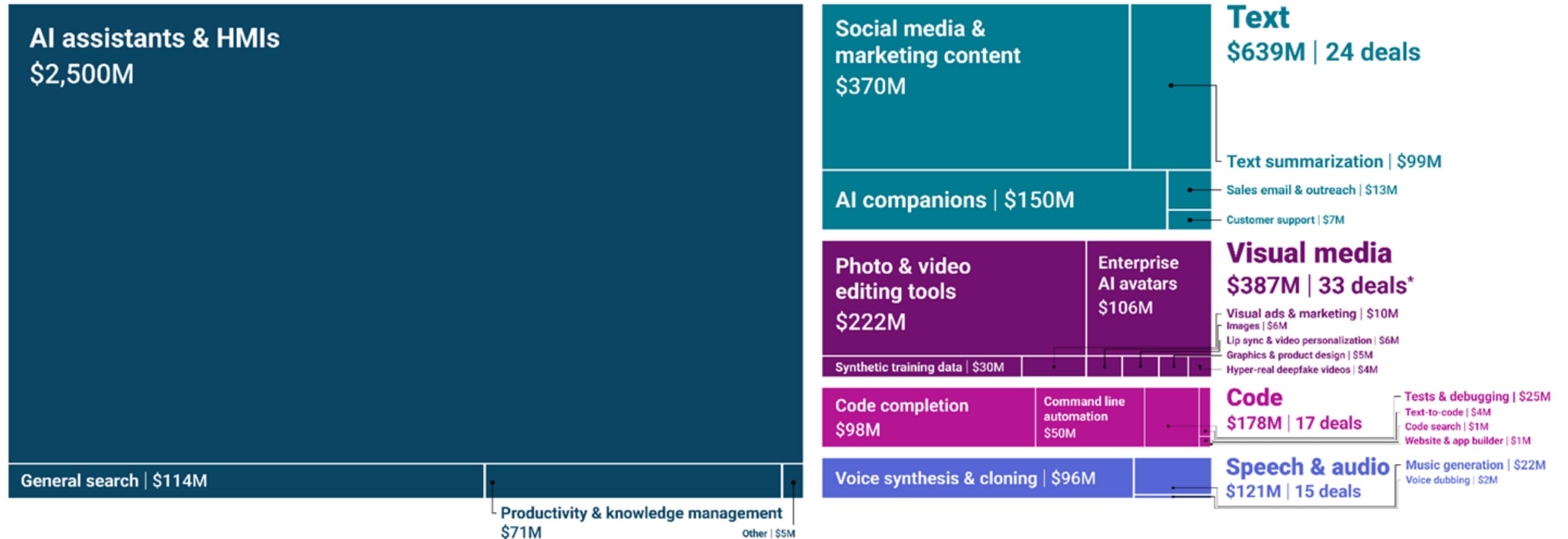


Where is all the money going in generative AI?

Distribution of generative AI funding, Q3'22 – Q2'23

Generative interfaces

\$2,690M | 23 deals



Source: CB Insights. Based on an analysis of 210+ generative AI companies building cross-industry enterprise solutions; excludes deals to industry-specific companies and model developers such as OpenAI.

*Includes 1 deal in motion capture animation and 1 deal in synthetic anonymization with undisclosed funding.

Surrounded by AI



- **Generative AI** – has found value already in marketing, advertising, drug development, legal contracts, video gaming, customer support and digital art.
- **Gartner declared generative AI as one of the most disruptive and rapidly evolving technologies** Emerging Technologies and Trends Impact Radar
- **Close to 80% of businesses are using or exploring AI. 35% have already adopted AI into operations while 42% are planning to implement.** [source](#)

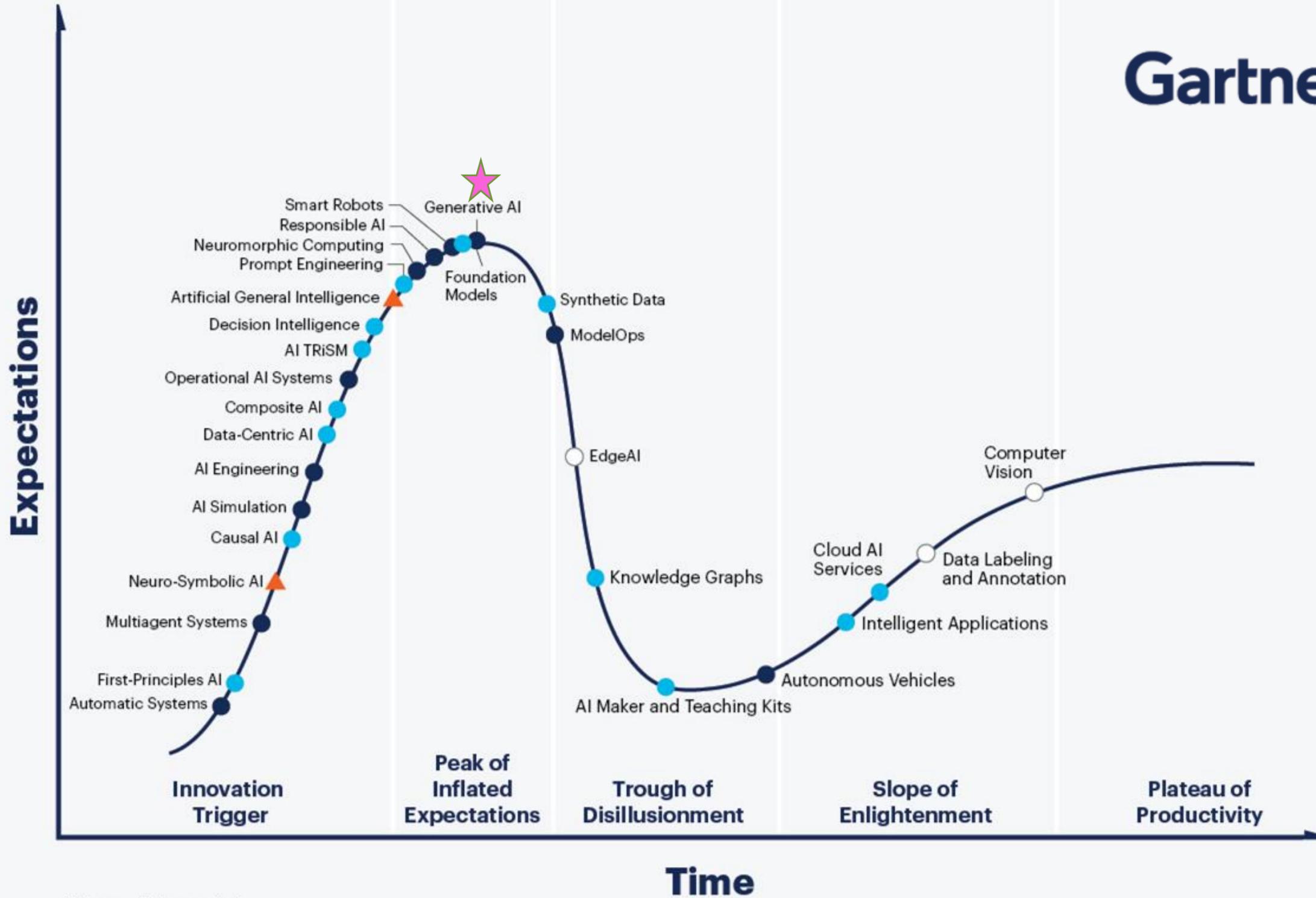
Tech

- Te

★
Gen AI

Hype Cycle for Artificial Intelligence, 2023

Gartner®



Plateau will be reached:

○ less than 2 years

● 2 to 5 years

● 5 to 10 years

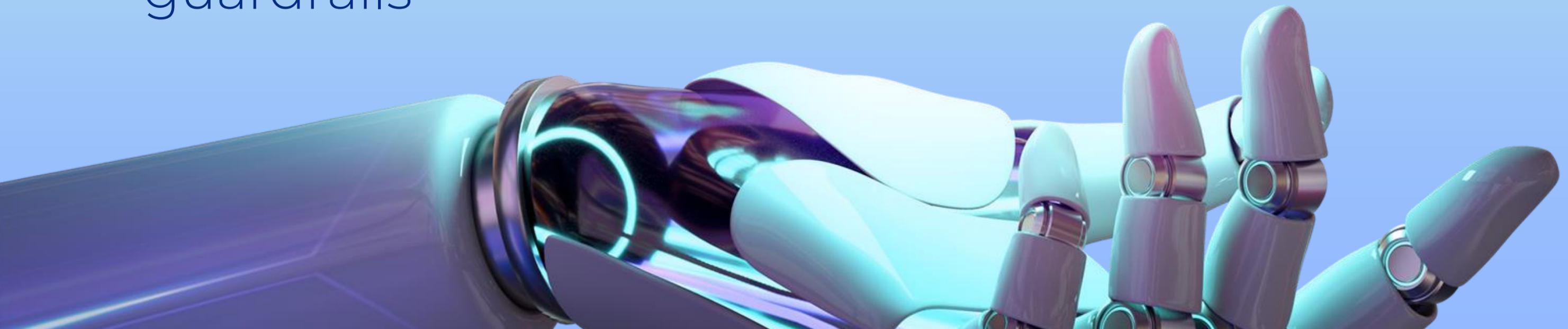
▲ more than 10 years

⊗ obsolete before plateau

As of July 2023

How Gen AI is different from past EdTech:

- The Infrastructure is already in place
- It's a conversational experience
- It's happening in every industry at the same time
- LLMs are biased- Not neutral like much other EdTech
- Those who are making the tech are requesting guardrails



**What IF
We do nothing?**



Will AI Widen the Digital Divide?

Old Digital Divide
Computers in
Schools, High
Speed Internet,
1:1 devices...

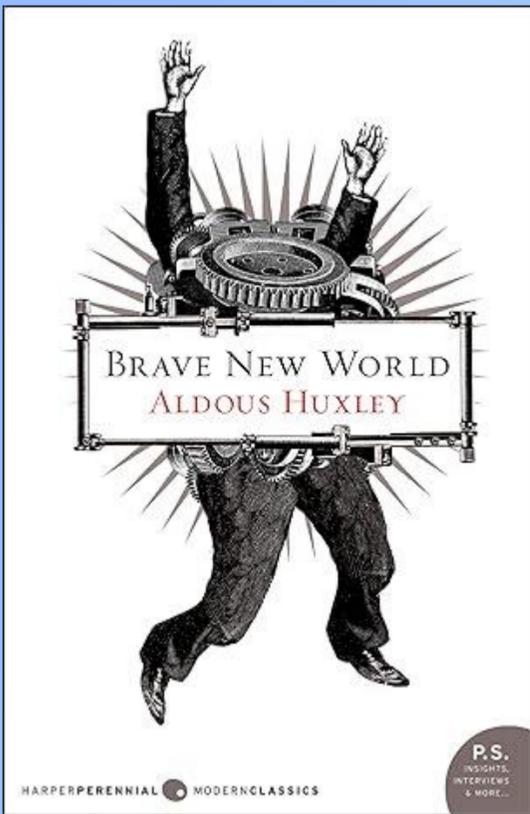


New Digital Divide

Who is
empowered to
learn with and
about AI

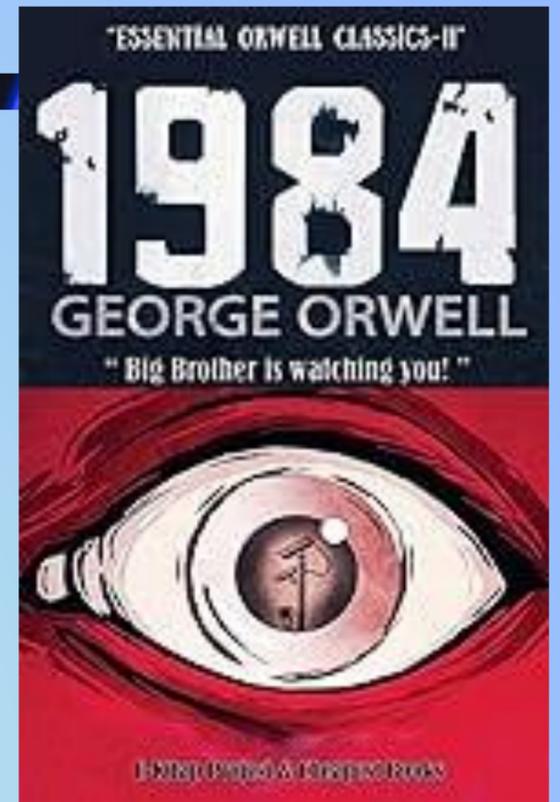


AI Benefits and Risks



Societal Impact

Have we entered George Orwell's "1984" OR
Aldous Huxley "Brave new World"?



What is real?
How do you
define 'real'?



PJ What are the primary risks of Generative AI that schools should be addressing? Make this answer short and to the point

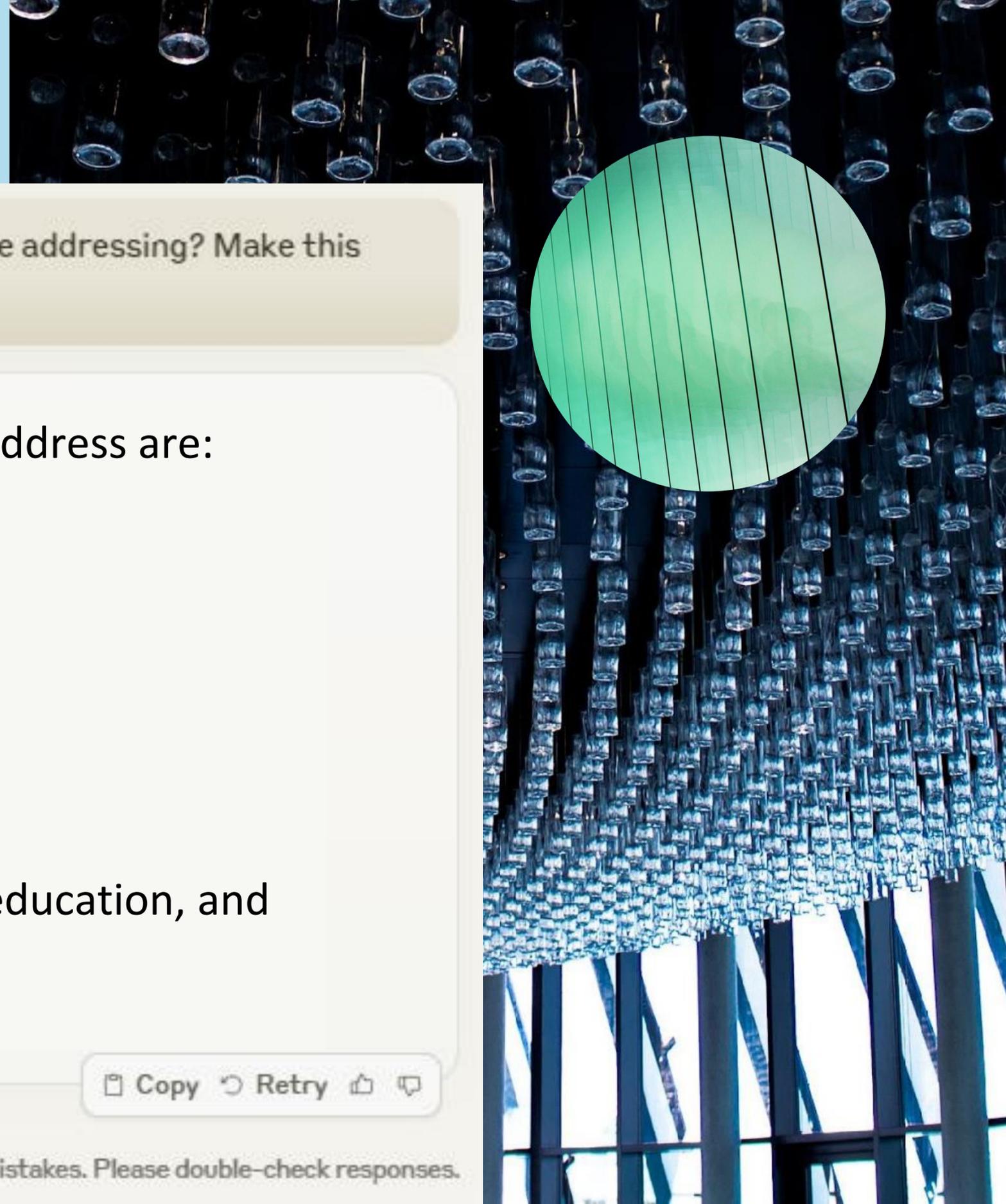
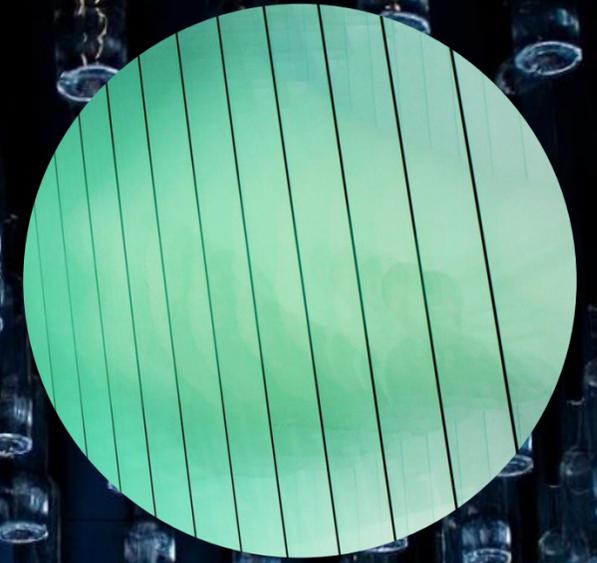
The primary risks of generative AI that schools should address are:

1. Academic integrity and plagiarism concerns
2. Potential to spread misinformation and biases
3. Privacy and data security issues
4. Overreliance hindering skill development
5. Accessibility and equity challenges
6. Ethical considerations around AI use
7. Schools need clear policies, training, digital literacy education, and open discussions to mitigate these risks.

Copy Retry Like Comment



Claude can make mistakes. Please double-check responses.



Types of Questions about AI in Education

	Risk	Opportunity
Present	“How do we stop kids from cheating?”	“How can we use AI tools to improve education?”
Future	“Will AI replace teachers?”	“How can we rethink education in an age of AI?”

AI Has Benefits and Drawbacks

“AI can really help teachers (for example, a Spanish teacher can ask it to write a short story using certain vocabulary words and certain grammatical features). However, it can be harmful when students use it to get answers for questions on their assignments or to do writing assignments for them, because it's impossible to prove, unlike traditional plagiarism.”

— High school teacher

Potential Benefits & Risks of Using AI in Education

Potential Benefits

Content development and differentiation

Assessment design and timely, effective feedback

Tutoring and **personalized** learning assistance

Aiding **creativity** and **collaboration**

Operational and administrative **efficiency**

Plagiarism and academic dishonesty

Diminished student and teacher agency and **accountability**

Compromised student **privacy** and unauthorized data collection

Overreliance and loss of critical thinking

Societal bias and lack of cultural sensitivity

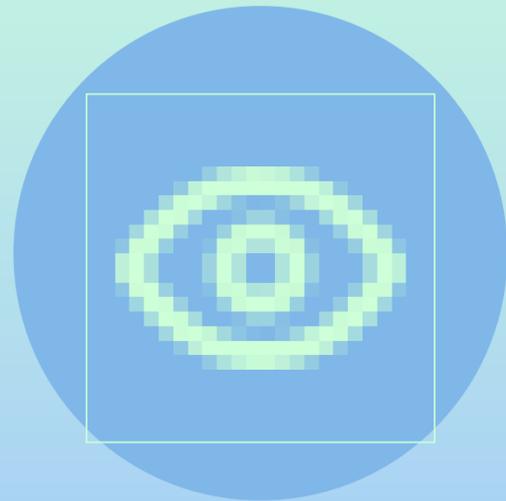
Potential Risks

We Need AI Guidance

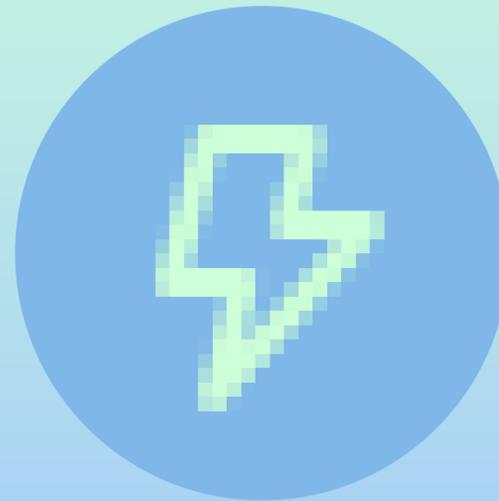
We can't control it and we can't ban it *but* we can help students *learn to use it*, in a supervised way, in a thoughtful way and a meaningful way.

— Sarah Eaton, Associate Professor University of Calgary,
Expert in AI Education

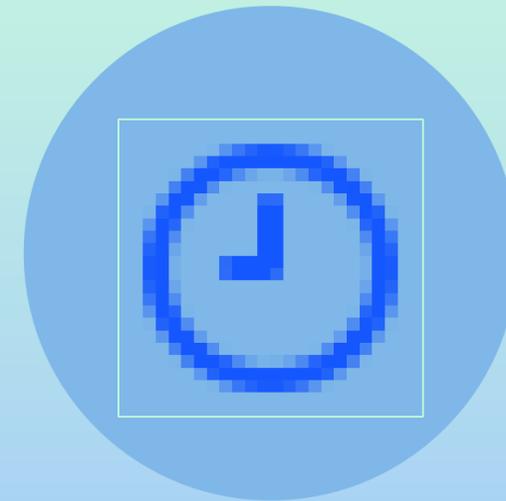
K12 Challenges



**Preventing
students from
cheating**



**How to have
conversations
with the
community**



**What's
appropriate for
what grade
levels?**

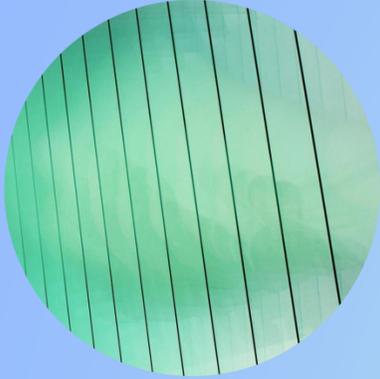


Cheating?

Map & Compass vs GPS

 Microsoft Bing

Image Creator
from Designer



Steps for Implementing Gen AI in K12



AI Roles and Responsibilities in Education

Superintendent

- Drives innovation
- Provides guidance
- Engages in policy
- Approves resources

Principal

- Implements education system's requirements
- Supports teachers
- Provides guidance to families

IT Coordinator

- Gives technical guidance
- Reviews software
- Authorizes access
- Ensures privacy and security

Teacher

- Implements policy
- Instructs student AI use
- Ensures academic integrity and ethical applications
- Uses AI to support instruction

Relevant Policies in the US

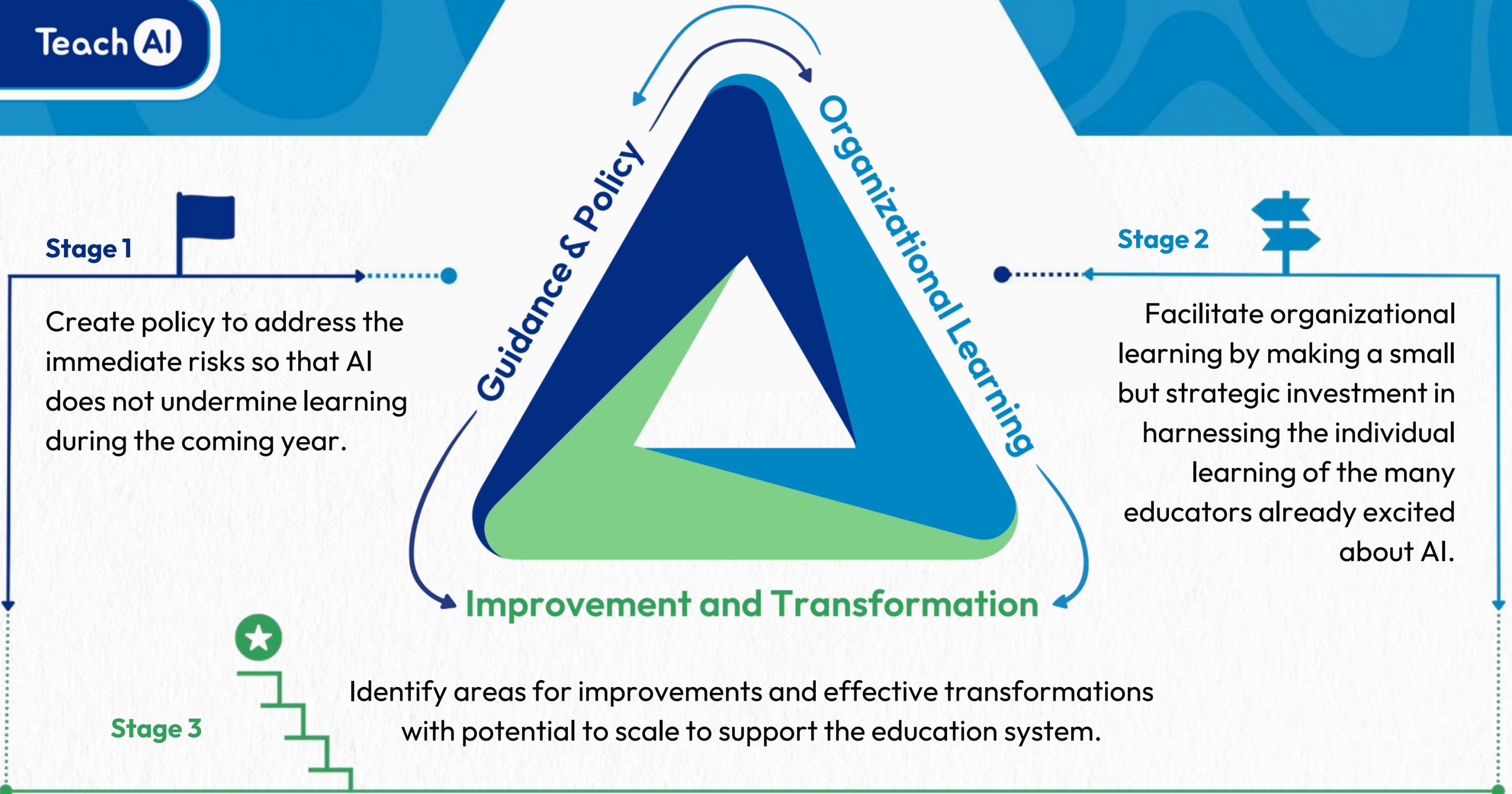
FERPA - AI systems must protect the privacy of student education records and comply with parental consent requirements. Data must remain within the direct control of the educational institution.

COPPA - AI chatbots, personalized learning platforms, and other technologies collecting personal information and user data on children under 13 must require parental consent.

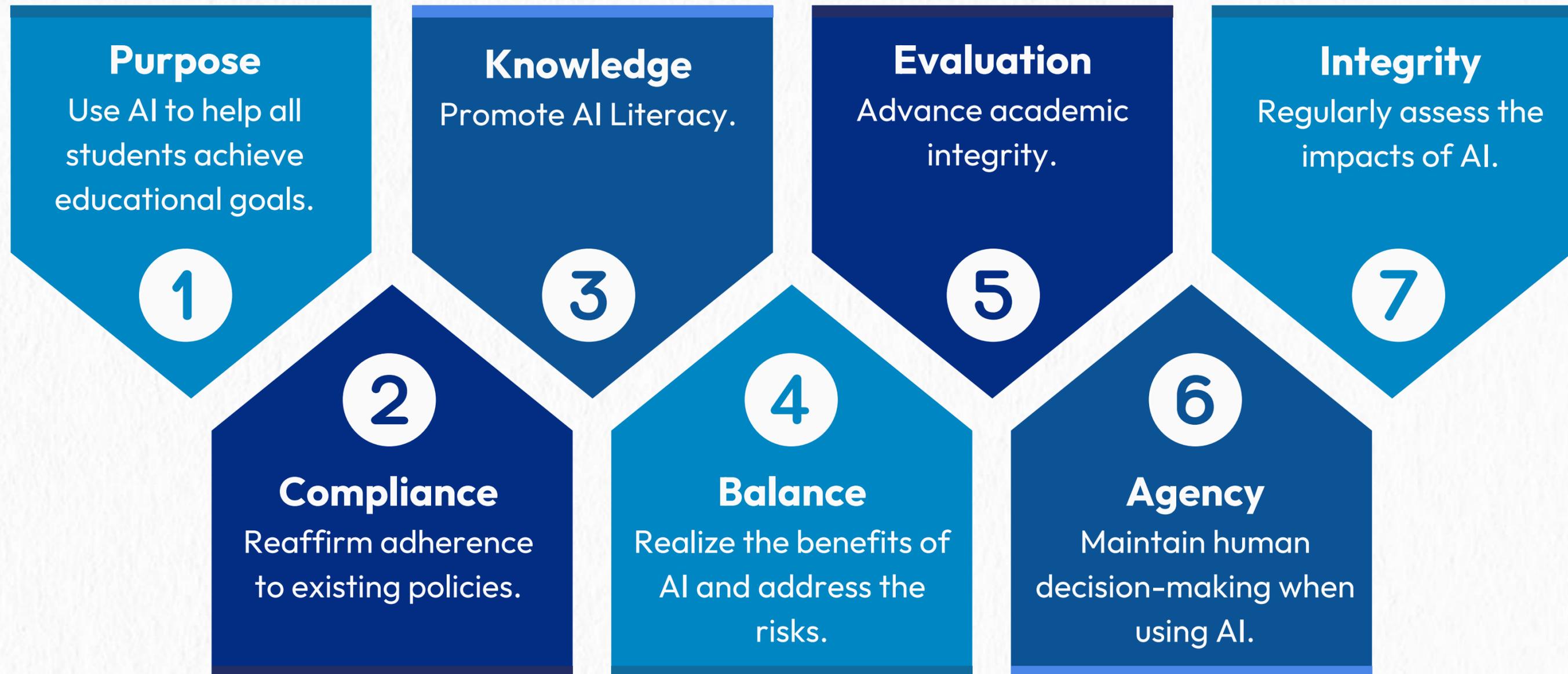
IDEA - AI must not be implemented in a way that denies disabled students equal access to education opportunities.

CIPA - Schools must ensure AI content filters align with CIPA protections against harmful content.

Section 504 - This section of the Rehabilitation Act applies to both physical and digital environments. Schools must ensure that their digital content and technologies, like AI, are accessible to students with disabilities.



Seven Principles for AI in Education



Sample Student Agreement for AI Use

AI can help me learn better and is important for my future, so I promise to use it the right way and make smart choices.

1. I will use AI tools responsibly and will not use AI in a way that could harm myself or others.
2. I will only use AI to support my learning and will follow my school's rules and teacher's instructions on when and how to use AI on an assignment.
3. I will be honest about when I use AI to help with assignments, and I will not turn in work that is fully created by an AI as my own.
4. If I use AI, I will review its work for mistakes.
5. I will check with my teacher when unsure about what is acceptable.

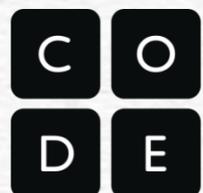
☒ Sample language when reviewing your class syllabus: AI tools may be used for brainstorming or preliminary research, but using AI to generate answers or complete assignments without proper citation or passing off AI-generated content as one's own is considered plagiarism.

AI Guidance for Schools Toolkit

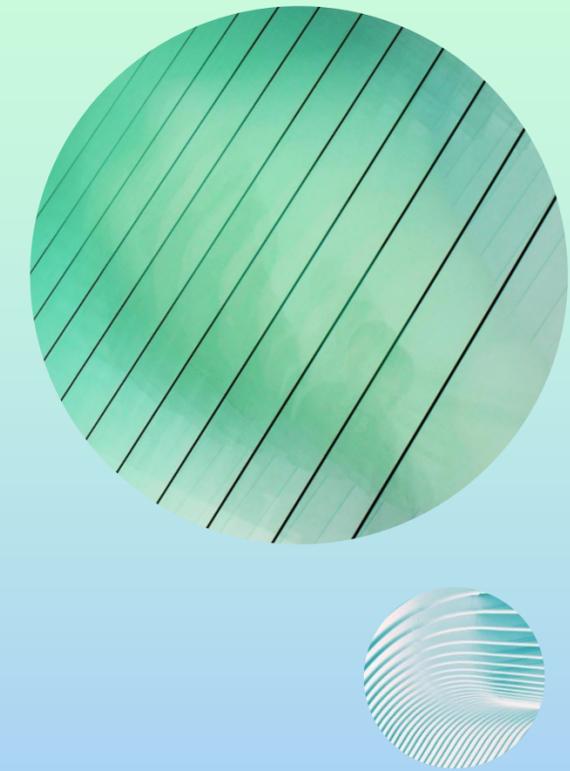
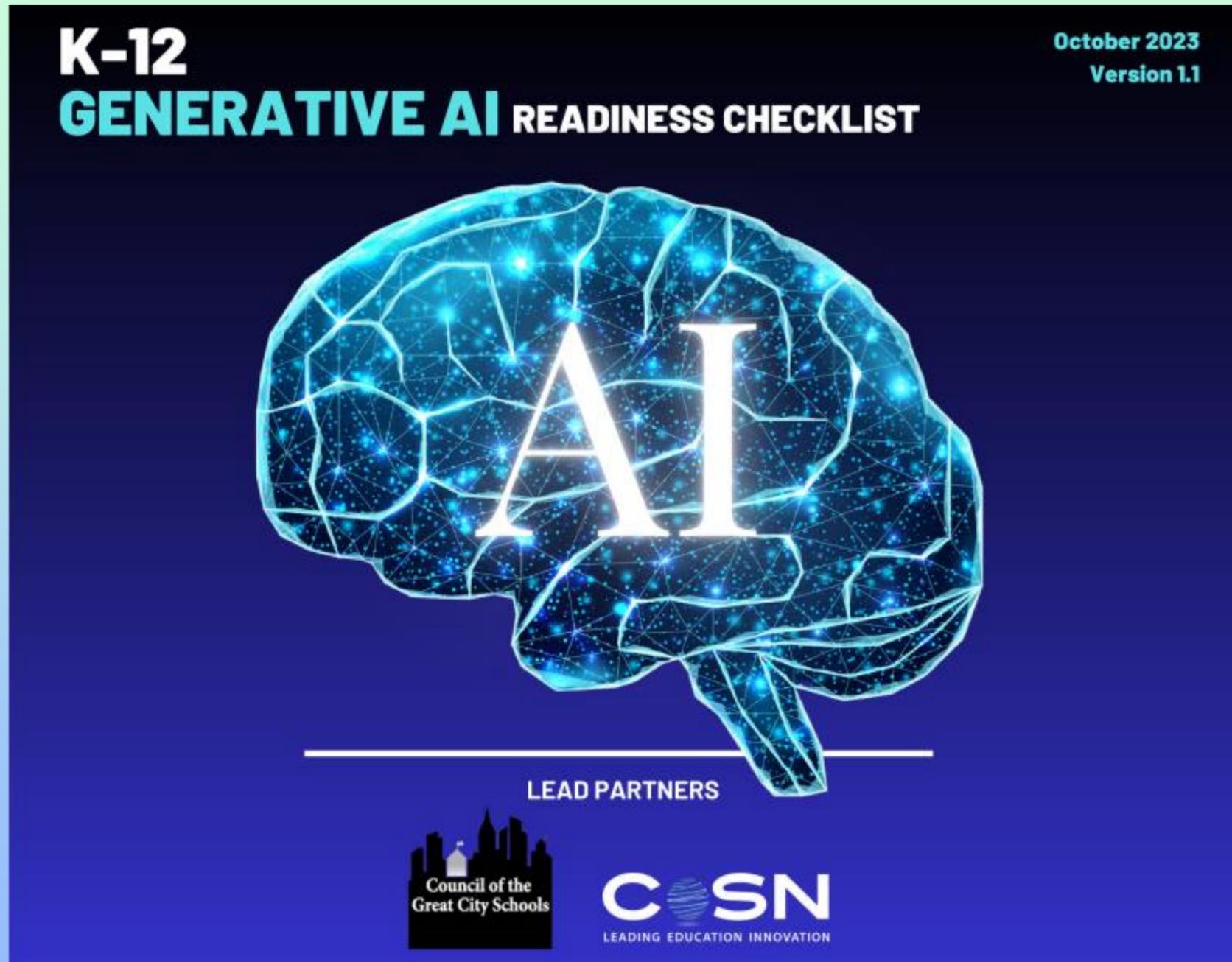
- For education authorities, school leaders, and teachers
- To help create thoughtful guidance on incorporating AI in education
- Principles and a framework for incorporating AI in education
- Sample language as a starting point for:
 - School Guidance on the Use of AI
 - Addendums to Existing Policies
 - Letter to Staff
 - Student and Class Policies
 - Letter to Parents and Guardians
 - An AI in Education Presentation



Visit
teachai.org/toolkit

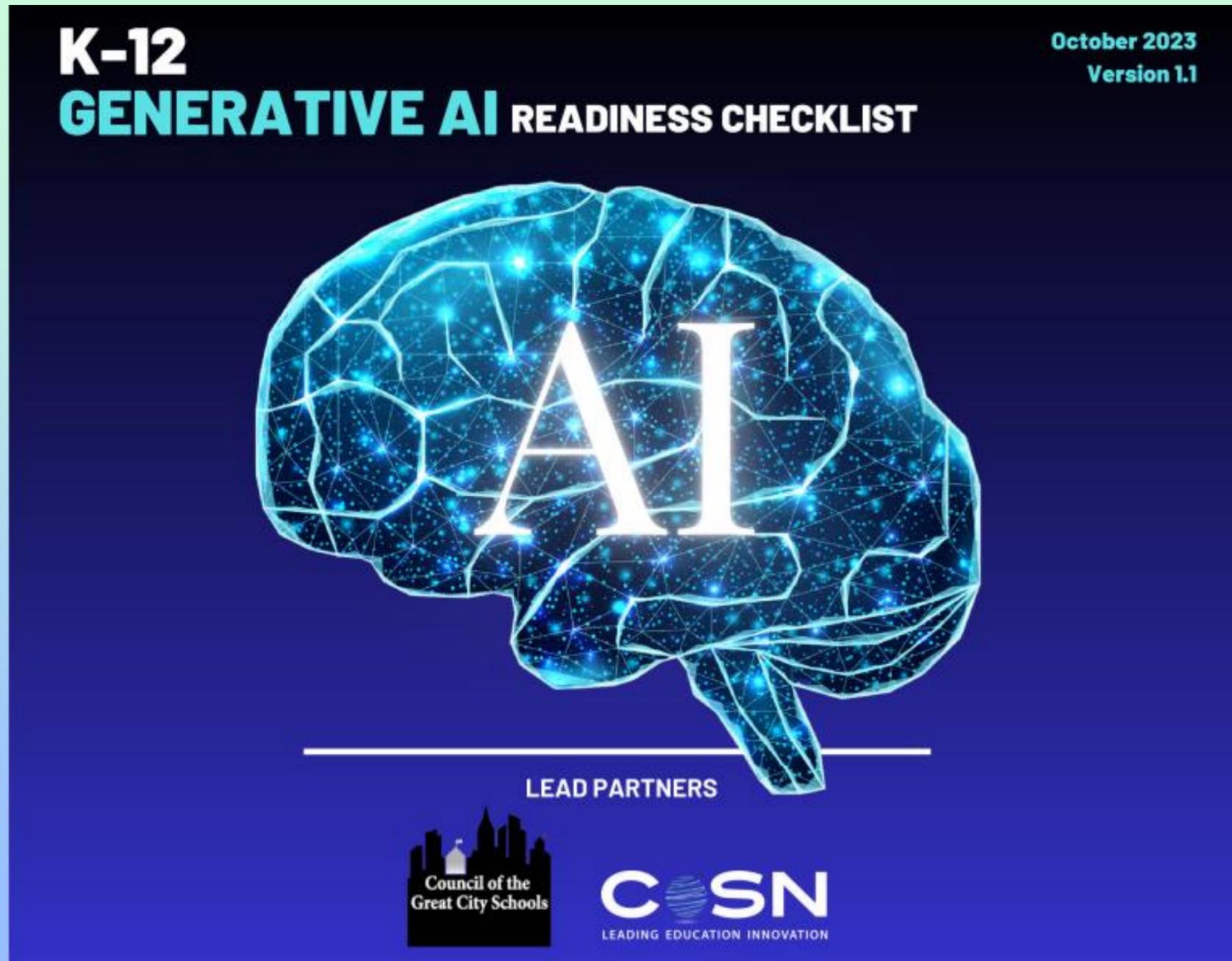


Where Are You? A Readiness Checklist



Where Are You? A Maturity Matrix

Where Are You? A Readiness Checklist

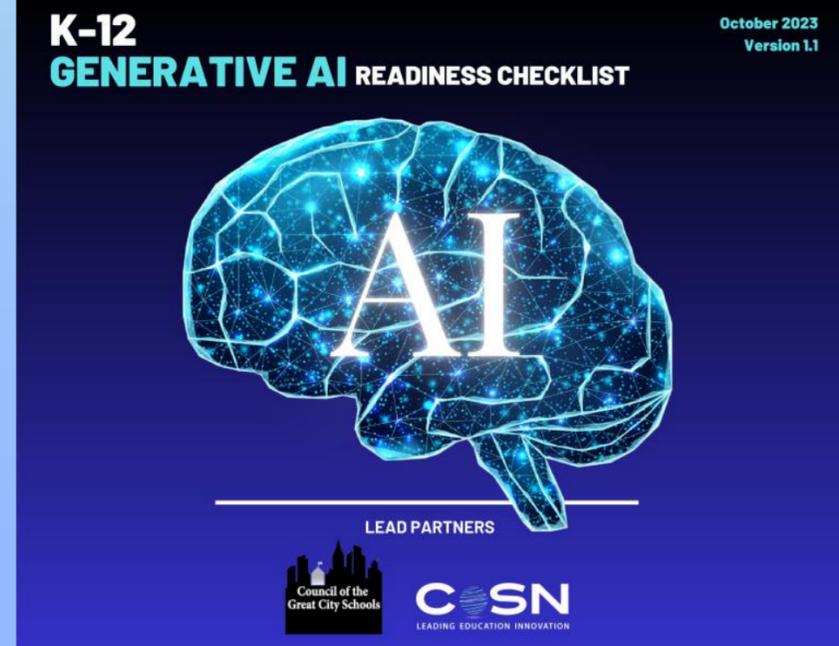
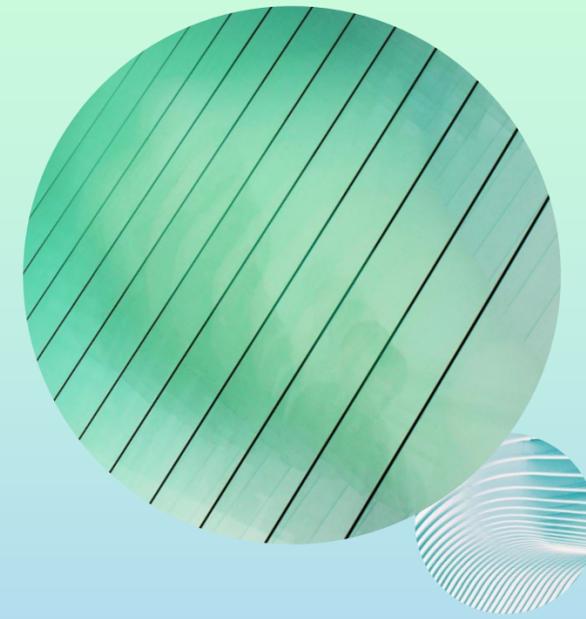


Where Are You? A Maturity Matrix

Gen AI Readiness & Maturity

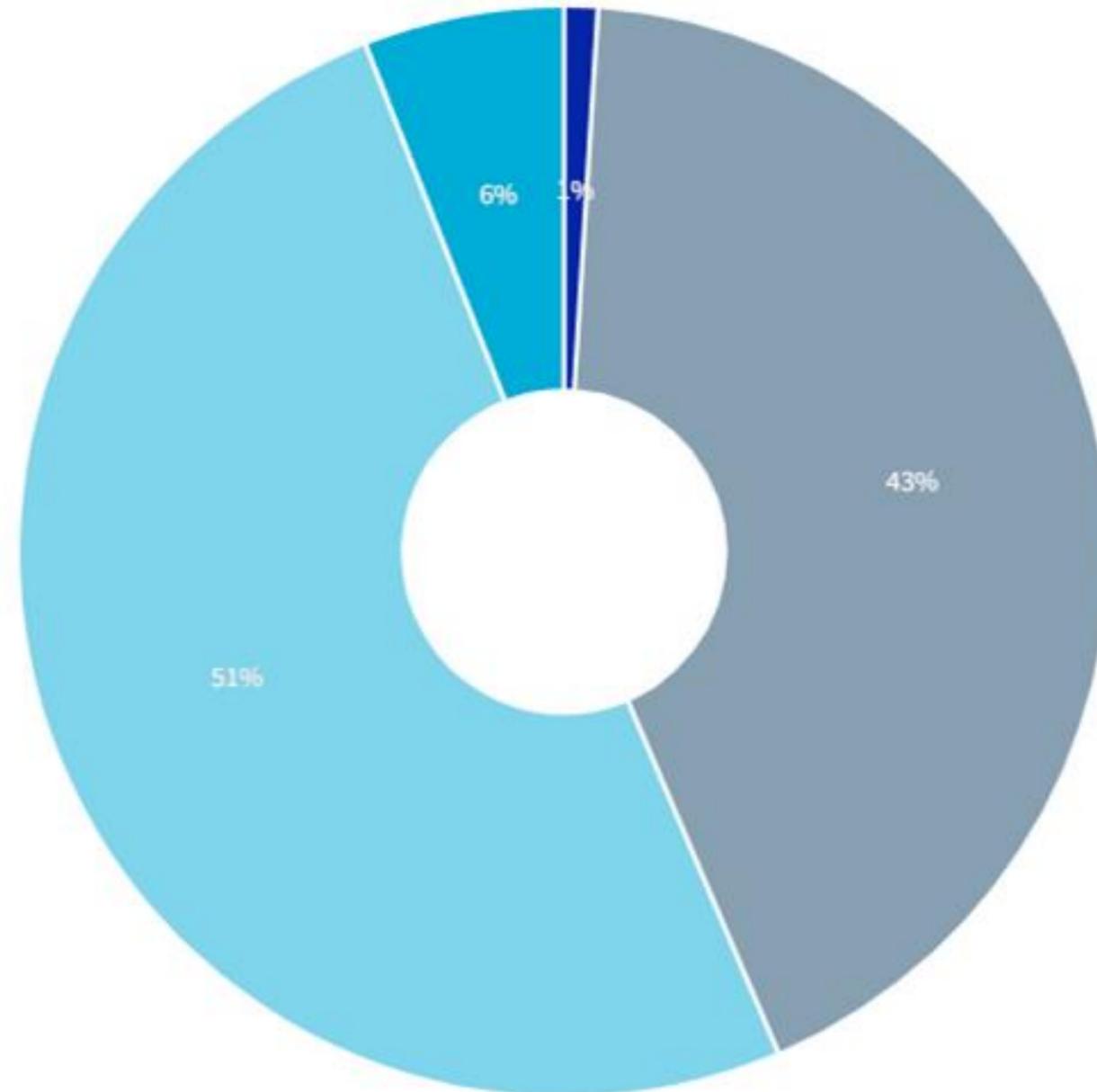
Is based on

- Executive Leadership Readiness
- Operational Readiness
- Data Readiness
- Technical Readiness
- Security Readiness
- Legal/Risk Management



In the next year, I expect my/our district/school's use of artificial intelligence-driven instructional tools to:

Decrease a lot Decrease a little Remain the same Increase a little Increase a lot



NOTE: Results show responses from teachers, principals, and district leaders
SOURCE: EdWeek Research Center survey, December 2023



A Flourish chart

Most expected the use of AI tools to increase.

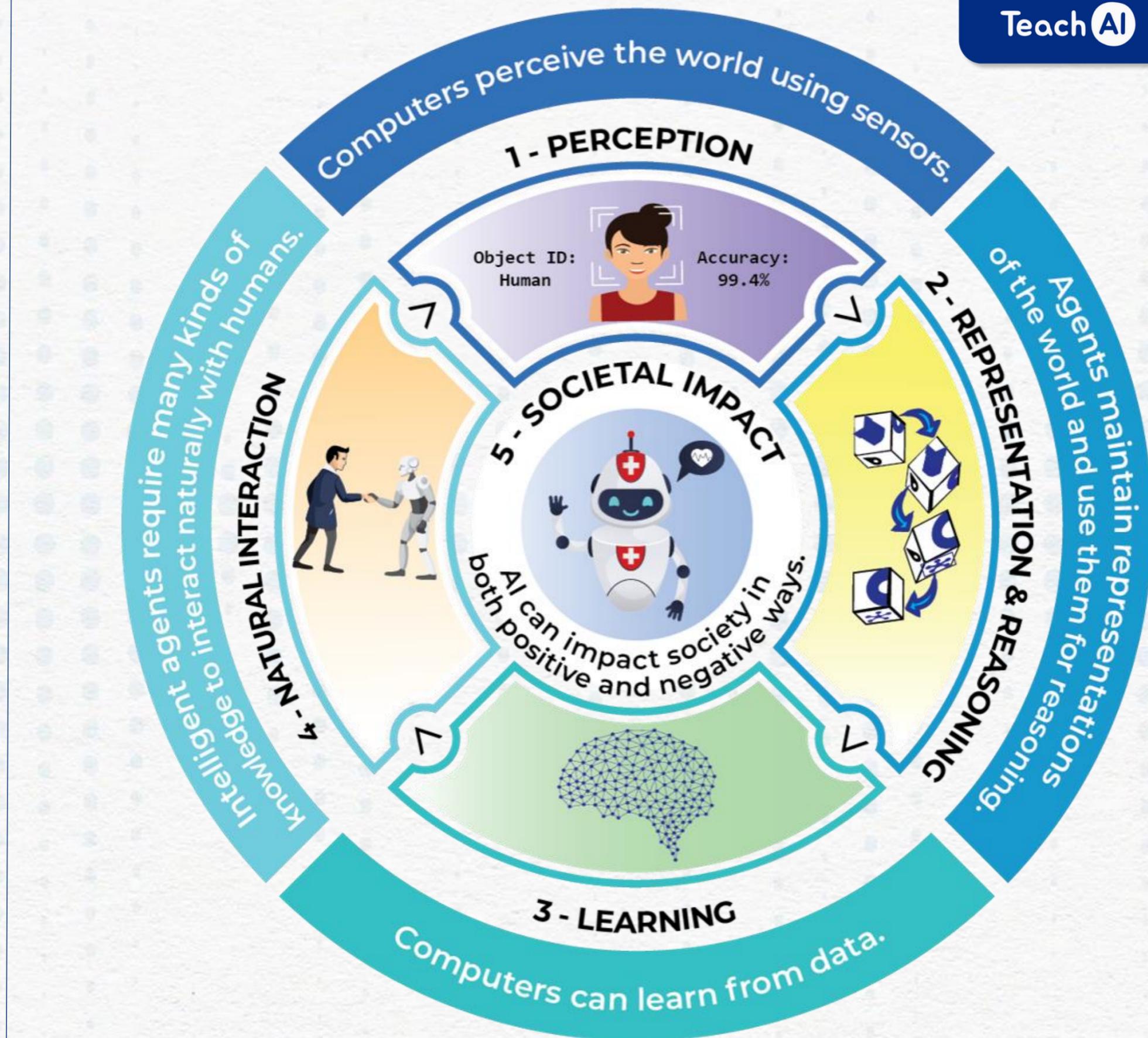


As of the end of 2023, Only 21% of respondents indicated clear district policy in their district

How AI Works

Five Big Ideas in AI

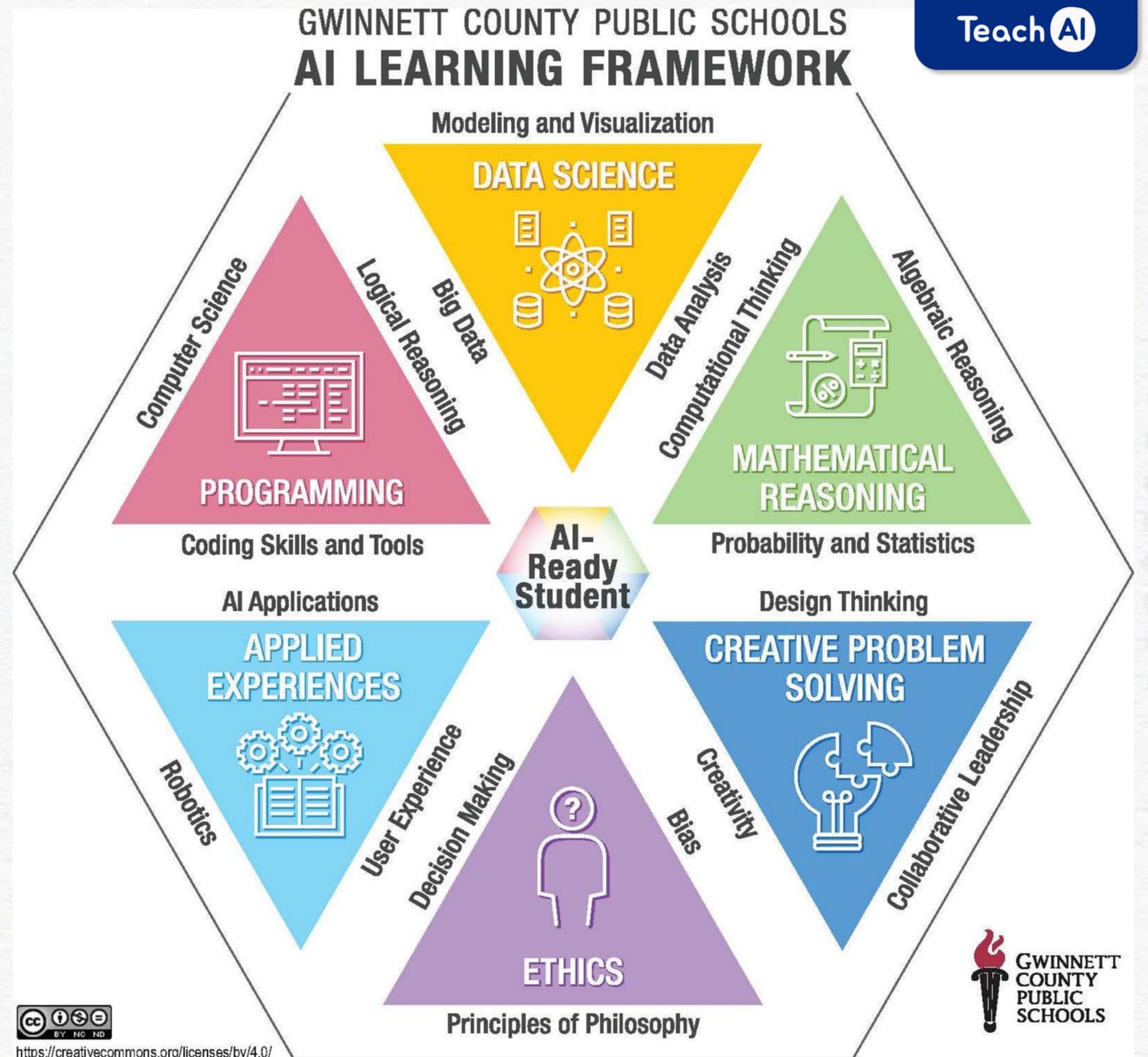
1. Perception
2. Representation & Reasoning
3. Learning
4. Natural Interaction
5. Societal Impact



How AI Works

Gwinnett County AI Learning Framework

1. Programming
2. Data Science
3. Mathematics
4. Problem Solving
5. Ethics
6. Applied Experiences



ARTIFICIAL INTELLIGENCE - PRINCIPLES AND BELIEFS

The promise of Artificial Intelligence (AI) in the Peninsula School District is substantial, not in substituting human instructors but by augmenting and streamlining their endeavors. Our perspective on AI in education is comparable to using a GPS: it serves as a supportive guide while still leaving ultimate control with the user, whether the educator or the student.

Our unwavering commitment to Universal Design for Learning (UDL) shapes our belief that our use of AI should align with UDL's three core principles: diversified ways of representation, action/expression, and engagement. AI can facilitate presenting information in diverse formats, aligning with individual learners' needs. Similarly, AI can offer students various means of showcasing their knowledge and participating in learning activities. Additionally, AI can provide numerous ways to keep learners engaged, ensuring a dynamic learning environment receptive to their interests and motivations.

We advocate for AI to expand and facilitate meaningful, learner-centric personalization, celebrate individual differences, and nurture student independence. We aim to utilize AI to grant learners of all backgrounds equal access to educational opportunities, thereby reducing barriers to learning, as is the goal of UDL.

We view **AI as a tool that can intensify the human element in education**. AI can undertake routine tasks, freeing teachers to invest more time in direct, interpersonal interactions with students. Its potential for improving assessments, providing immediate, personalized student feedback, and delivering valuable, implementable data to teachers to improve instructional effectiveness is encouraging.

While we acknowledge the benefits of AI in education, we recognize our collective role as educators in avoiding potential pitfalls and challenges associated with AI, such as algorithmic bias. We are committed to ensuring equity and fairness in our use of AI and scrutinizing AI tools to guarantee they reflect these values. We must evaluate all AI tools and models to ensure that humans are at the center of all AI usage and that models use equitable, inclusive algorithms.

“We view AI as a tool that can intensify the human element in education.”

“We regard data privacy and security as fundamental aspects of ethical AI use.”

Provides an “Example Classroom Policy”

Can I Use AI on this Assignment?

Generative AI Acceptable Use Scale

Generative AI refers to any of the thousands of Artificial Intelligence tools in which the model generates new content (text, images, audio, video, code, etc)

This includes, but is not limited to, Large Language Models/ LLMs such as ChatGPT, Google Bard, etc, Image creators such as Dall-E3, Adobe Firefly, and any tools with built in generative AI capabilities such as Microsoft CoPilot, Google Duet, Canva, etc etc)

	Level of AI Use	Full Description	Disclosure Requirements
0	NO AI Use	This assessment is completed entirely without AI assistance. AI Must not be used at any point during the assessment. This level ensured that student rely solely on their own knowledge, understanding, and skills.	No AI disclosure required May require an academic honesty pledge that AI was not used.
1	AI-Assisted Idea Generation and Structuring	No AI content is allowed in the final submission. AI can be used in the assessment for brainstorming, creating structures, and generating ideas for improving work.	AI disclosure statement must be included disclosing how AI was used. Link(s) to AI chat(s) must be submitted with final submission.
2	AI-Assisted Editing	No new content can be created using AI. AI can be used to make improvements to the clarity or quality of student created work to improve the final output.	AI disclosure statement must be included disclosing how AI was used. Link(s) to AI chat(s) must be submitted with final submission.
3	AI for Specified Task Completion	AI is used to complete certain elements of the task, as specified by the teacher. This level requires critical engagement with AI generated content and evaluating its output. You are responsible for providing human oversight and evaluation of all AI generated content.	All AI created content must be cited using proper MLA citation. Link(s) to AI chat(s) must be submitted with final submission.
4	Full AI Use with Human Oversight	You may use AI throughout your assessment to support your own work in any way you deem necessary. AI should be a 'co-pilot' to enhance human creativity. You are responsible for providing human oversight and evaluation of all AI generated content.	You must cite the use of AI using proper MLA or APA citation. Link(s) to AI chat(s) must be submitted with final submission.

**North
Carolina
Department
of
Public
Instruction**



“Gen AI Resistant” Assessments



The Cowbell

News and Resources from UWGB's Center for the Advancement of Teaching and Learning

CATL Homepage

Articles

News

Events and Programs

Teaching Toolbox ▾

New Instructor Resources ▾

Faculty & Instructor Quick Links

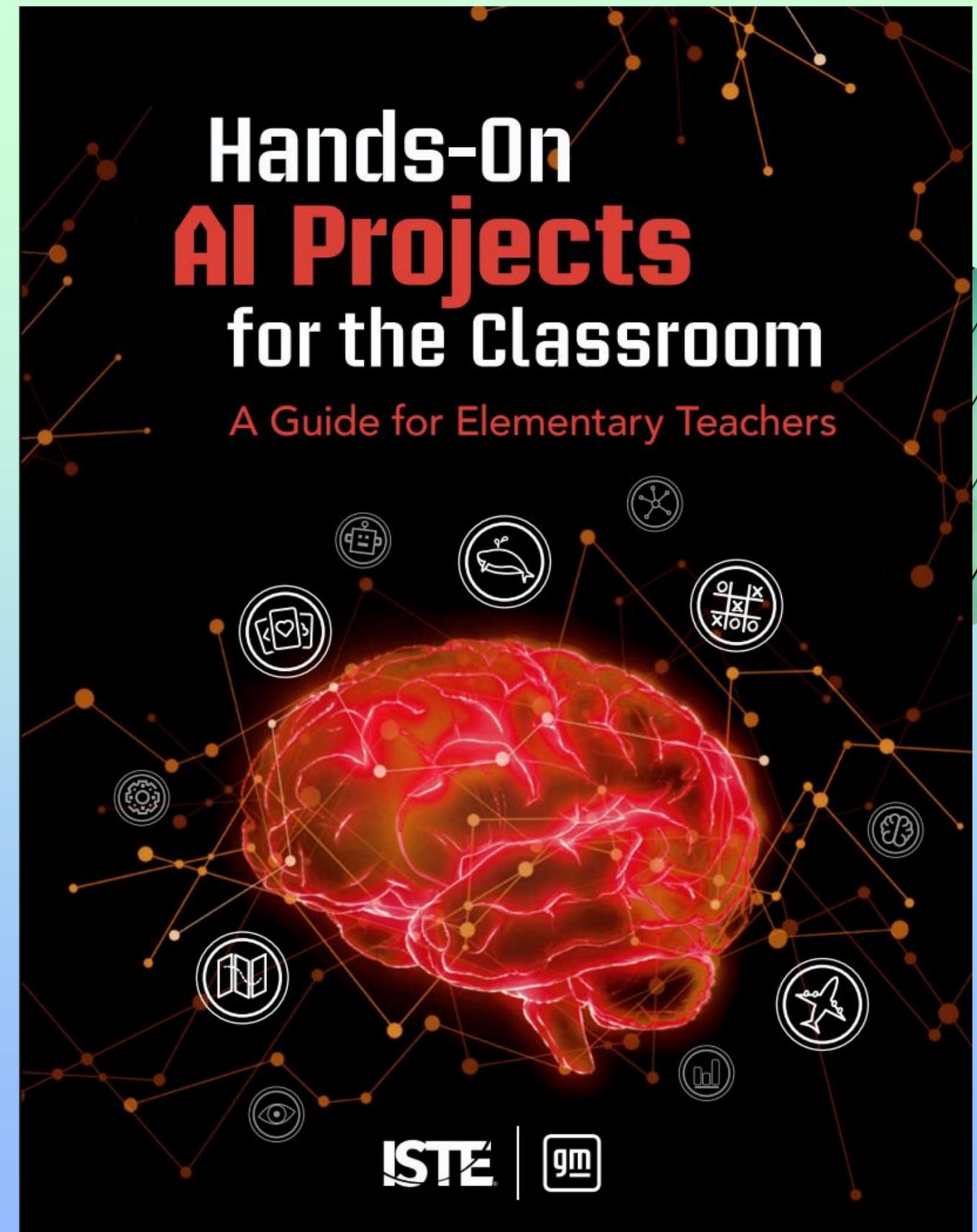
CATL College Drop-In Hours

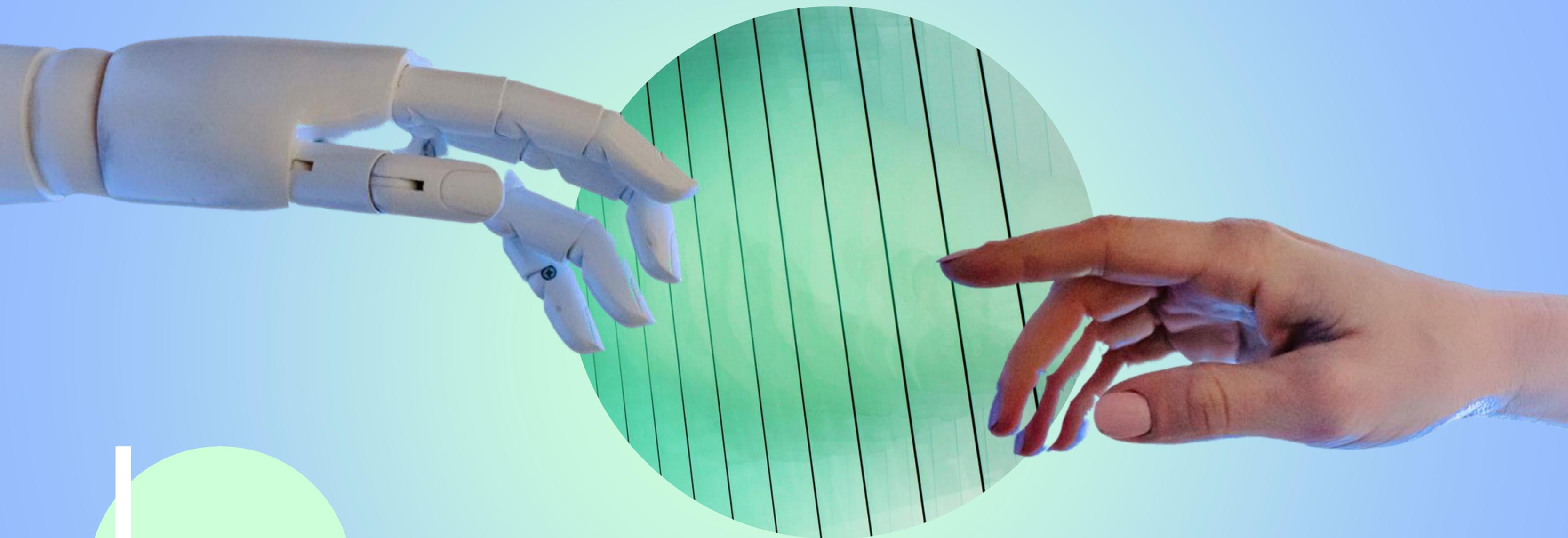
Strategies for Creating “Generative AI-Resistant” Assessments

The use of generative-AI tools in education has recently garnered significant attention, placing educators in a unique position to consider their roles in higher education and how students engage with such tools. [In a previous blog post](#), we introduced AI technologies and their endless capabilities, as well as potential implications for higher education. Additionally, we provided [advice on considerations, precautions, and ethical concerns](#) for using generative-AI in the classroom.

Elementary Teacher Guide

Projects engage students in both unplugged and technology-infused activities that explore key facets of AI technologies.



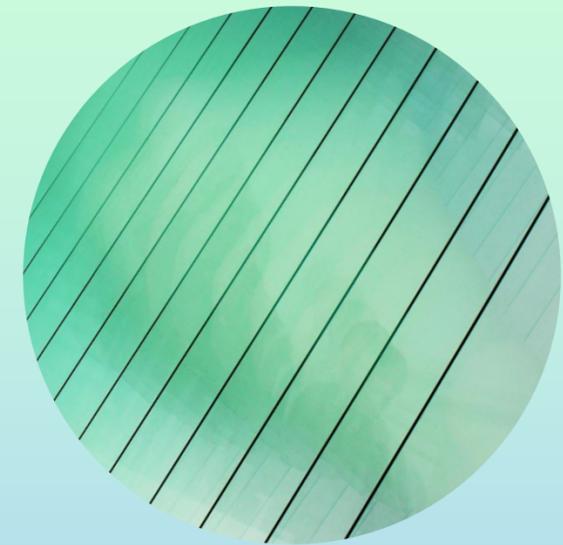


“This is the WORST AI you’ll ever use... it gets better every day!”

Limitations of Traditional Teaching

- Scaling the teacher
- Personalization challenges
- Scaling Socratic learning opportunities
- Limits to any individual's knowledge
- Timeframe of availability
- Limited individual tutoring

GenAI can serve as a **tutor**, an intellectual **sparring partner**, and a **personal instructor**, available at *any time one on one*.





Khan Academy announces GPT-4 powered learning gu...

Watch

GPT-4

on

Khan Academy

Watch on YouTube



Khanmigo

AI power



This conversation is recorded and viewable by your parent and teacher.

Can you just tell me the answer?

It's important that you learn how to do this yourself! What do you think you need to do to multiply 2 by $5/12$?

They need the same denominator.

That's a good thought, but in this case, you don't need to find a common denominator because you're multiplying, not adding or subtracting. What else could you try?

Type message (do NOT share any personal data)



Clear chat



MAGIC SCHOOL



Favorites [Change Order](#)



Professional Email

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



E-mail Responder

Generate a customized professional e-mail communication in response to an email that you received.



Syllabus Generator

Generate a syllabus based on information provided about your class for the school year.



Teacher Observations

Generate areas of strength and suggestions for next steps for a teacher based on a classroom observation.



Rubric Generator

Have AI write a rubric for an assignment you are creating for your class in a table format.



Data Table Analysis

Generate a table with data of your choice for your class with associated questions.



Class Newsletter

Generate a newsletter to send to families weekly.



Group Work Generator

Generate group work activity for students based on a a topic, standard, or objective.



Jeopardy Review Game

Create a jeopardy review game for a fun way to review content with students!



YouTube Video Questions

Generate guiding questions aligned to a YouTube video.



CODE.org Curricula



Week 1	Lesson 1: Introduction to Machine Learning	Lesson 2: Types of Machine Learning	Lesson 3: Innovations in AI	Lesson 4: Patterns in Data	Lesson 5: Classification Models
Week 2	Lesson 6: Introduction to AI Lab	Lesson 7: Importing Models in App Lab	Lesson 8: Model Cards	Lesson 9: Saving Models in AI Lab	Lesson 10: Model Cards in App Lab
Week 3	Lesson 11: Numerical Models	Lesson 12: Numerical Data in AI Lab	Lesson 13: Customizing Apps	Lesson 14: AI Code of Ethics	Lesson 15: Project: Make a Machine Learning App
Week 4	Lesson 16: Issue Statements	Lesson 17: Survey Planning	Lesson 18: Survey Data in AI Lab	Lesson 19: Troubleshooting Models	Lesson 20: Creating an App
Week 5	Lesson 21: Project - Design an AI App				

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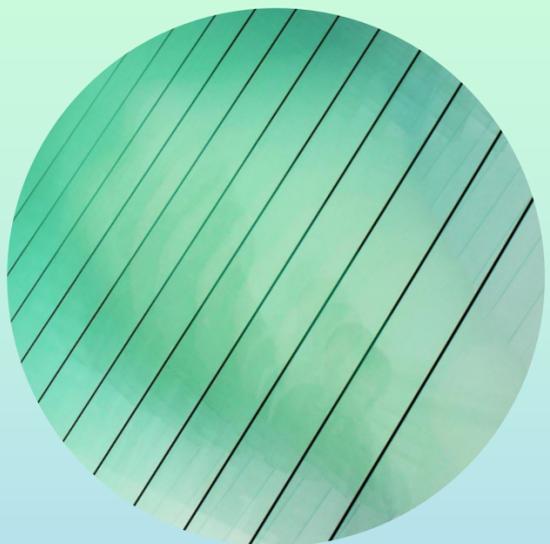
D

E

Grades 3-12

code.org/ai

aiEDU 10 Week PBL Course



The screenshot shows the aiEDU website header with navigation links: TEACH, EDUCATOR EMPOWERMENT, ABOUT, BLOG, CAREERS, and DONATE. The main content area features the title 'Intro to AI' and a description: 'A 10-week project-based learning course that introduces the fundamentals of AI through engaging, culturally relevant lessons.' A 'Download Now →' button is present. Below the button are three icons with text: a clock for '35 x 45-minute lessons', a graduation cap for 'Grades 9-12', and a location pin for 'Teacher-Led'. On the right side of the page, there is a large graphic of a hand holding a tablet displaying 'AI'.

Your Districts Next Steps Around AI

- Discuss with your cabinet (including your senior EdTech leader) what **your district position** should be regarding public Gen AI apps.
- Determine how to **support** teachers and students
- Create or modify an **Academic Integrity Statement**
- Consider student data privacy and security measures
- Teach AI **ethics & etiquette**
- Have an **eye to the future** for AI to help with your KPIs and other administrative tasks
- Consider a team review of <https://www.teachai.org/toolkit> & cgcs.org/genaichcklist

“I don’t think the generative AI is going to replace workers, but workers who work with generative AI will replace those who don’t”

— Erik Brynjolfsson, Director, Digital Economy Lab
at the Stanford Institute for Human-Centered
AI

Gen AI & K12 Lessons So Far

Districts really can't ban it

Use GAI as an assistant

Prompt Engineering is a key skill

Curriculum needs to shift accordingly



Gen AI & K12 Ethical Issues

Cheating

Potential for Misinformation

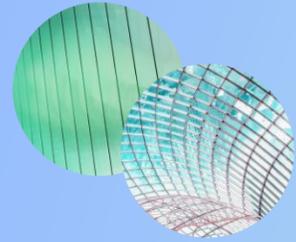
Digital Equity - Access to GAI

Privacy & Data Issues

Societal change



EdSAFE AI Benchmarks



“**Generative AI use for students under 13 is not permissible under federal law** or even the acceptable use policies of major generative AI providers. In some cases and **where state law allows**, using these platforms is acceptable for students aged 13-18 with affirmative parental consent.”



EdSafe AI Green, Yellow, Red use cases are being developed now and should be available this spring.



EDSAFE AI SAFE Framework

S

SAFETY

Security, Privacy, Do Not Harm

A

ACCOUNTABILITY

Defining Stakeholder Responsibilities

F

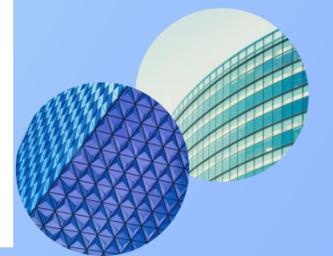
FAIRNESS

Equity, Ethics, and Mitigating Bias

E

EFFICACY

Improved Learning Outcomes





Learn how AI is shaping our world.

Join us for a day of learning and exploration.
#AILiteracyDay



AI Literacy Day, April 19th

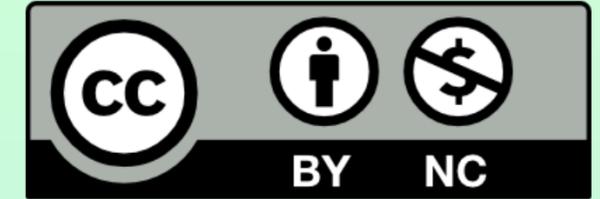
Thank you!



bit.ly/SAM_AI

LinkedIn  [in/petejust](https://www.linkedin.com/in/petejust)
pete@juststrategics.com





Attributions:

- “Where’s all the money going” chart: CB Insights
- [Gartner Hype Cycle](#)
- [EdWeek research center survey](#) December 2023
- AI4K12 “How AI Works”
- Claude.ai text results
- Gwinnett County’s AI Learning Framework
- NCDPI “Can I use AI?”
- UWGB's Center for the Advancement of Teaching and Learning “Gen AI Resistant Assignments”
- ISTE Elementary Teacher Guide
- MagicSchool.ai
- EdSAFE AI Benchmarks
- [Sal Kahn GPT-4 TEDtalk](#)
- [Code.org](#)
- [AiEDU](#)
- [TeachAI.org/](#)
- [Cosn.org](#)
- [CGCS.org](#)



Credits

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