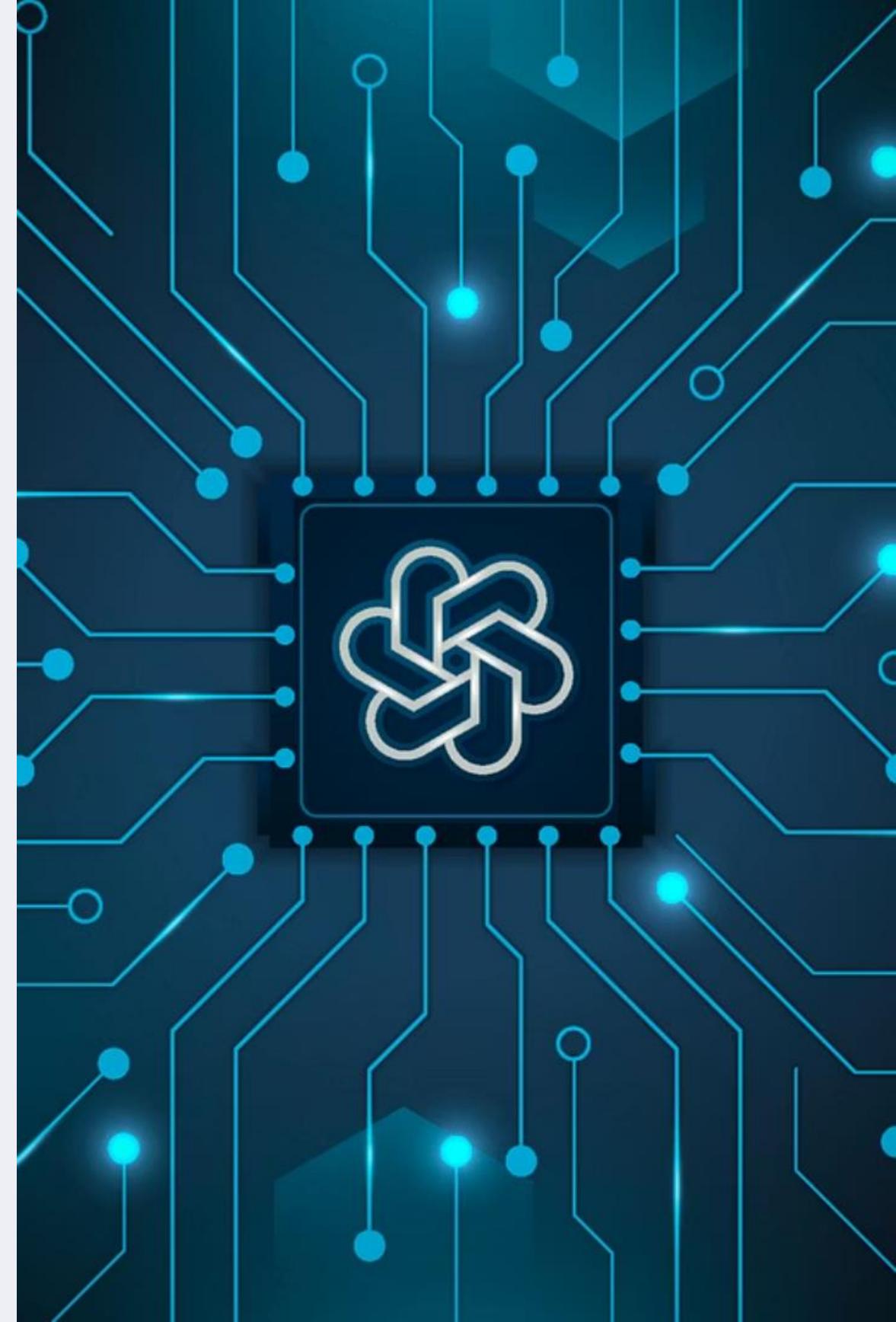


Artificial Intelligence and the Transformation of Education

by Ready Force Cyber



Who is Sean Flowers?



Executive Director, Ready Force Cyber

Army Reserve Cyber Officer

Adjunct UMGC

Chief Information Security Officer

PhD In Cybersecurity Leadership (In Progress)

Masters in Cybersecurity

Master's in Business Administration

Certified in Cyber Crime

CISSP, CISM, CCNA, CEH

What is Ready Force Cyber?

Ready Force Cyber" is a 501(c)(3) nonprofit that focuses on cybersecurity workforce development. We provide educational services and aim to empower individuals, organizations and communities with cybersecurity skills.

What we offer:

- Custom Curriculum Development
- Instructional Support
- Teacher Training
- Professional Development
- K-12 STEM Programs
- After School Programs



The AI Revolution and the Growing Need for Cybersecurity



AI Transformation

Artificial Intelligence is reshaping how we work, communicate, and process information.



Cross-Sector Adoption

Organizations across healthcare, finance, and education increasingly depend on AI systems.



Rising Cyber Threats

AI adoption creates new vulnerabilities that malicious actors actively exploit.



Skills Gap Challenge

Ready Force Cyber builds the next generation of professionals equipped to secure AI systems.

Key Areas of Transformation



Personalized Learning

AI adapts content and pace to each student's unique needs. Customized learning paths enhance engagement and knowledge retention.



Intelligent Tutoring Systems

24/7 AI tutors provide immediate feedback on student work. Support scales beyond what traditional classroom ratios allow.



Administrative Automation

AI handles grading, attendance, and scheduling tasks. Teachers gain more time for meaningful student interactions.



Data-Driven Insights

AI analyzes learning patterns to identify intervention needs. Educators make informed decisions based on comprehensive student data.

The Artificial Intelligence Skills Gap

Many educators, students, and professionals struggle to harness AI's full potential.



Knowledge Barriers

Teachers and students lack exposure to evolving AI capabilities and applications.



Workplace Demands

Employers increasingly require AI literacy for productivity and innovation.



Widening Divide

Rapid technological advancement creates inequality in educational and career opportunities.

Artificial Intelligence is your Thought Partner!

Not Thought Replacement!

Don't Resist AI, Insist AI

Embrace AI as a Thought Partner, Not a Replacement: *Shift from viewing AI as a threat to seeing it as a powerful tool for learning. Focus on leveraging AI to enhance, not replace, critical thinking skills.*

Create Assignments that Stimulate Critical Thinking: *Design tasks that require students to analyze, evaluate, and synthesize information. Prioritize problem-solving, creative expression, and in-depth exploration. **

Supplement and Expand Ideas with AI: *Encourage students to use AI to: Generate initial ideas and brainstorm. Explore different perspectives and arguments. Research and gather relevant information. Refine and improve their writing.*
Example: After students write a persuasive essay, have them ask an AI to provide counterarguments and then revise their essay to address those points.

Focus on the Process, Not Just the Product: *Emphasize the importance of critical thinking, analysis, and evaluation throughout the learning process. Use AI to support and enhance these skills, rather than simply generating final answers.*

Generative AI: Creative and Practical ways

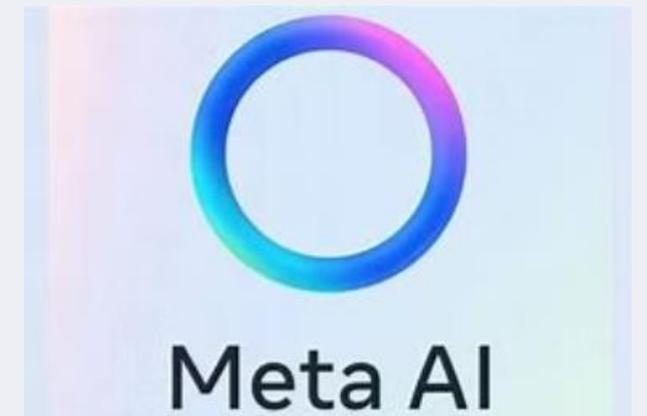
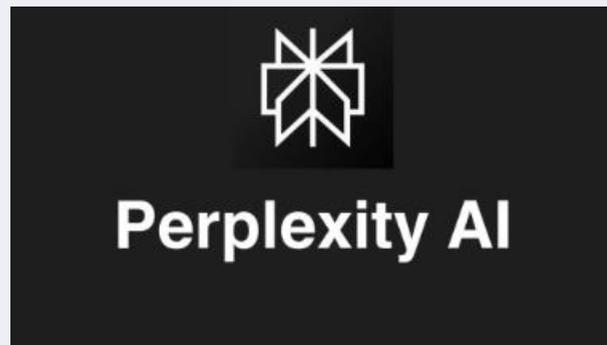
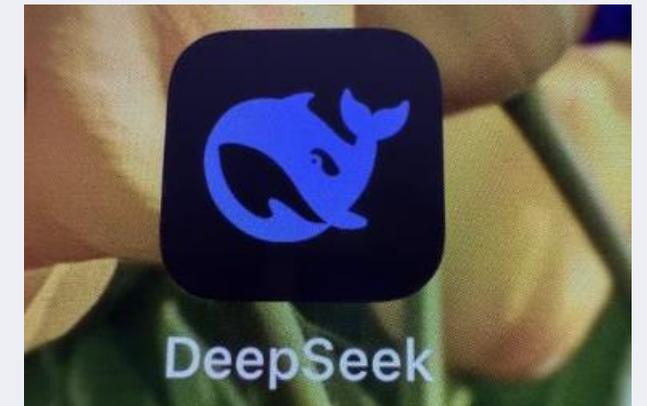
- ① Content Creation
 - Image Generation
 - Code Generation
 - Chatbots and Virtual Assistance
 - Deep Research
 - Music and Art Creation
 - Educational Tools

Generative AI: Creative and Practical ways Cont.

AI can use reasoning in several ways to solve problems, make decisions, and provide insights.

- ① Logical Reasoning
- Probabilistic Reasoning
- Deductive Reasoning
- Inductive Reasoning
- Commonsense Reasoning

Generative AI GPTs & many more!



AI Everywhere!

Apple Intelligence

Apple Intelligence is Apple's AI platform, introduced in 2024, designed to enhance user experiences across their devices. It integrates generative AI models with personal context to provide tailored assistance while prioritizing privacy.

AI Training by Default

LinkedIn recently updated its Terms of Service to clarify how it uses member data for AI training. By default, LinkedIn uses data from user profiles, posts, and other content to train its generative AI models.



Artificial Intelligence Impact on Education



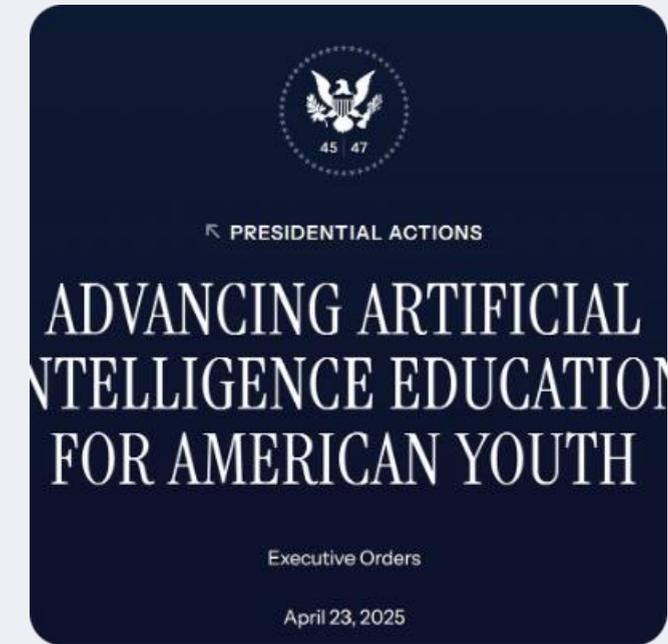
AI-Powered Learning

Artificial intelligence creates personalized learning experiences with adaptive feedback tailored to each student's needs



AI Powered Education

Texas School Alpha leverages cutting-edge AI technology to enhance educational outcomes. By personalizing learning experiences and providing real-time feedback, the school ensures each student receives tailored support.



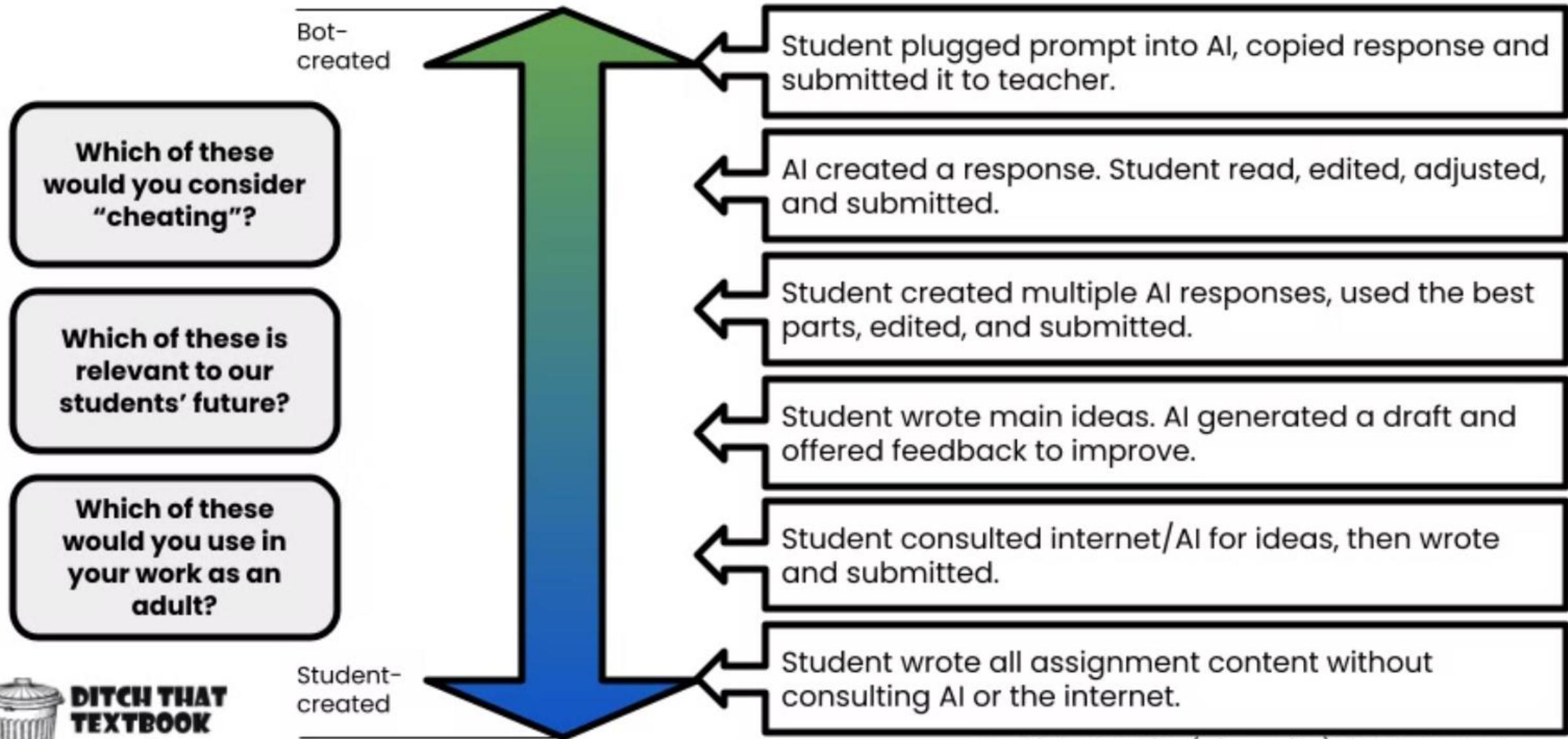
AI Intergration for All

Promote AI literacy and proficiency among Americans by promoting the appropriate integration of AI into education, providing comprehensive AI training for educators, and fostering early exposure to AI concepts.

What are the implications for the classroom?

- **Students can use ChatGPT to do their assignments.** - There. I'll just say it clearly and plainly since we're all thinking it
- **TurnItIn and other plagiarism checkers can't catch it** - What ChatGPT creates is an original work each time you ask
- **Schools and districts will try to block it, but that won't stop much** - Students have cell phones
- **ChatGPT and forthcoming chatbots like it have their limitations**
- **School/class uses of ChatGPT, chatbots, and AI aren't all bad**
- **Students will have to learn how to navigate life with AI**

It's time to rethink "plagiarism" and "cheating"



Balancing AI Use While Fostering Critical Thinking

The digital classroom requires a thoughtful approach to AI integration that maintains academic integrity.

Design AI-Proof Assignments

Create tasks requiring personal reflection, real-world application, and in-class presentations that AI cannot replicate.

Teach AI Literacy

Help students understand AI's capabilities and limitations through critical evaluation of AI-generated content.

Incorporate Process-Based Assessment

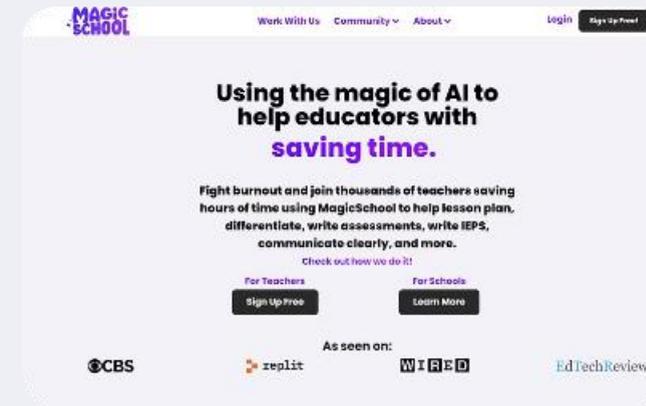
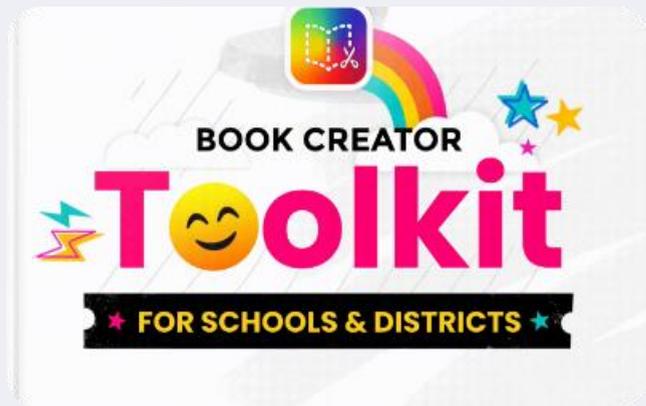
Value the journey of learning by requiring drafts, research notes, and reflection journals throughout projects.

Promote Collaborative Learning

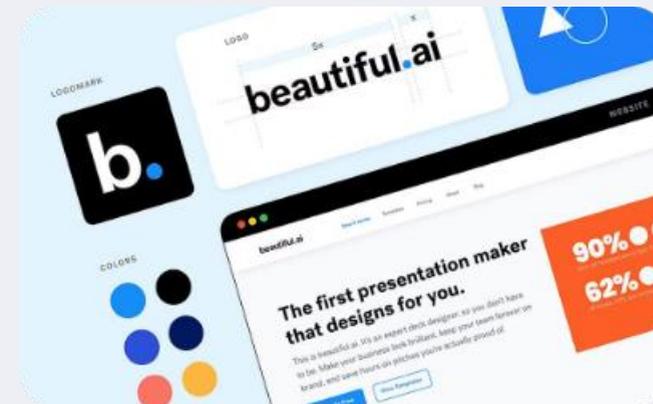
Encourage peer discussions, group problem-solving, and team-based projects that develop human connection skills.

The goal isn't to eliminate AI but to ensure it enhances rather than replaces student thinking.

AI-Powered Tools for Educators and More!



AI-Powered Tools for Productivity



Prompt Engineering Technique

Prompt engineering is the art of crafting effective instructions for AI models, like ChatGPT, to generate desired outputs. It's like writing a recipe for the AI to follow, ensuring you get the exact result you want.

How Detailed Prompts Improve Outputs

State Your Goal

What exactly would you like the AI tool to produce for you? This first step is intuitive enough, but you're more likely to get what you want from your session if you specify up front exactly what you're looking for.

1

Specify your preferred format.

Do you want a simple list of options? Academic citations? Web addresses? GPS coordinates? Witty iambic pentameter? Be specific, because AI tools can structure results and conversations in nearly infinite ways based on the preference of the user.

2

Warnings and guardrails

AI tools are improving but they can still make up stuff. If you're looking for accurate factual information, tell it. The same goes if there is some other constraint you want the AI to keep in mind, like a category or ideas or a cluster of locations to avoid in its response.

3

Context dump

This is a pretty broad and variable section of the prompt where you mention anything else you think might help the AI understand your particular situation and needs. There's no need to overthink things or use special language. "Dump" is the verb here for a reason. Tell the AI anything that comes to mind like you would another human being

4

How Ready Force Cyber is Closing the AI Educational Gap

Ready Force Cyber bridges the AI knowledge divide through innovative educational approaches and practical solutions that empower both educators and students.



Specialized Training

Customized AI literacy programs for educators at all technical skill levels.



Practical Tools

Ready-to-implement AI resources designed specifically for classroom integration.



Ethical Frameworks

Guidelines for responsible AI use that maintain academic integrity.



Community Building

Creating networks of educators sharing best practices in AI implementation.

Unlocking Pathways of AI

AI Fundamentals

Build a solid foundation in artificial intelligence concepts and applications for your organization.

Prompt Engineering

Master the art of crafting precise instructions to maximize AI tool performance.

AI Automation

Streamline workflows by implementing AI solutions that handle repetitive tasks efficiently.

Building Your Own LLM

Develop customized language models tailored to your specific industry needs and challenges.

AI-Powered Workflows

Transform your entire operation with integrated AI systems that enhance productivity and innovation.

Your Custom Solution with Ready Force Cyber

Tailored AI implementation strategies designed specifically for your educational environment. We don't just offer technology—we deliver transformative solutions that address your unique challenges.

Questions?

Now is the time to explore any thoughts or concerns about AI in education. How might you integrate these tools into your classroom?

- 1 AI Applications**
What AI tools interest you most for your teaching area?
- 2 Ethical Considerations**
How will you balance AI assistance with academic integrity?
- 3 Implementation**
What support do you need to effectively integrate AI?
- 4 Next Steps**
How will you apply what you've learned today?



Resources



AI Tools

- [40 AI Tools for Teachers, Educators and Classroom \(Free and Paid\)](#)



Communities

- [15 Best Lesson Planning AI Tools For Teachers and Free Templates](#)



Support

- [Lesson: Intro to Artificial Intelligence- Applied Digital Skills](#)

References

- **OpenAI:** <https://openai.com> - Leading developer of GPT models and AI research
- **UNESCO AI in Education:** <https://en.unesco.org/artificial-intelligence> - Guidelines for ethical AI implementation
- **Stanford HAI:** <https://hai.stanford.edu/education> - Human-centered AI research and resources
- **National AI Initiative:** <https://www.ai.gov/education/> - Federal resources for AI in education
- **AI4K12:** <https://ai4k12.org> - Framework for teaching AI concepts in K-12