

Responsible AI Integration in Education



<https://bit.ly/AMSDai>

November 9, 2023

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Digital Learning Bloomington Public Schools



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digital learning
BLOOMINGTON PUBLIC SCHOOLS

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Discussion and questions



<https://bit.ly/AMSDai>



digital learning
BLOOMINGTON PUBLIC SCHOOLS

01

Introductions



<https://bit.ly/AMSDai>

Welcome



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Drag a dot to share
your current understanding of
Generative Artificial Intelligence.



Expert User



What's AI?

Fully understand AI



Have yet to try.

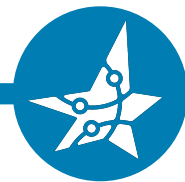


<https://bit.ly/AMSDai>

Rotate & Reflect

- How did you rate yourself and why?
- What is your takeaway from our group results?
- Where would your teachers put their dots?

Goals & Objectives



Attendees will leave with:

- A general understanding of Generative Artificial Intelligence in education
- Ideas of how to productively leverage this emerging technology
- Examples of usage with teachers and students
- A framework for school implementation



02

Overview & Misconceptions



AI in Our Everyday Lives



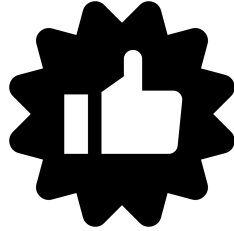
Virtual personal assistants

AI-powered virtual assistants such as Siri, Alexa, and Google Assistant can help users with tasks such as setting reminders, playing music, and answering questions.



Self-driving cars

AI is used to help cars navigate, make decisions and avoid obstacles, making self-driving cars possible.



Personalized recommendations

AI is used to analyze user's preferences and browsing history to provide personalized recommendations on websites, apps, and streaming services.



Smart home devices

AI-powered smart home devices such as thermostats, lights, and cameras can learn user's preferences and automatically adjust settings accordingly.



Healthcare

AI-powered medical diagnosis and treatment plans, and helping doctors to identify patterns in patient data that would be difficult for humans to spot.



Fraud detection

AI-powered systems can detect fraudulent activities by analyzing patterns in financial transactions.

A BIG Impact

Time taken to reach 1m users (mths)

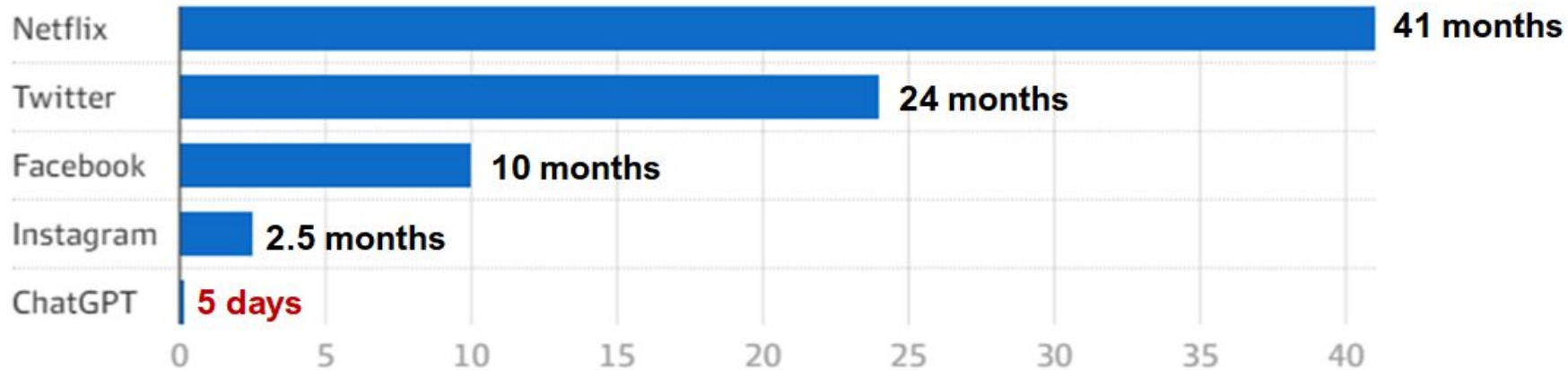


Chart: Financial Review • Source: Genevieve Roch-Decter, CFA

Artificial Intelligence is Multimodal



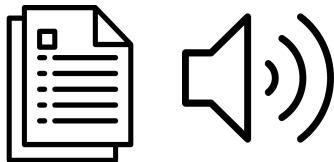
Text to Text



Text to Image



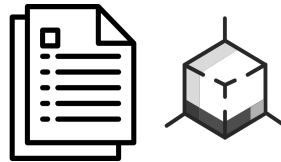
Text to Video



Text to Audio



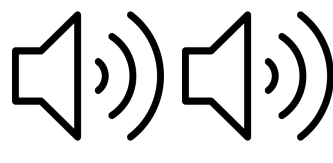
Text to Code



Text to 3D Image



Audio to Text



Audio to Audio

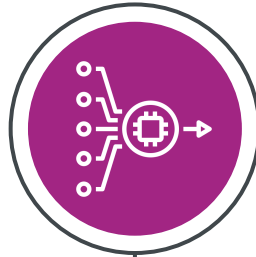


Image to Text

Generative AI In Education



Undetectable



Ubiquitous



Transformative

How does it work?

How does GenAI work? ([AI 101](#))

1. Data in
2. Math, math, math
3. Output



AI Unplugged

1. Create a group of 2-3 people.
2. Look at “data set”
3. Answer questions using only your data.



Data Set 1

1

Dogs, often hailed as humanity's most loyal companions, embody an unparalleled blend of affection, loyalty, and joy. Their unwavering devotion, playful antics, and intuitive understanding of human emotions make them more than just pets; they become family. The unconditional love they offer, coupled with their ability to uplift spirits with just a wag of their tail, cements their status as truly the best companions one could ask for.

Data Set 2

2

Cats, with their graceful elegance and enigmatic personalities, have a unique charm that captivates the heart. Their independent spirit, combined with sudden bursts of affection, provides a perfect blend of tranquility and warmth in any household. The gentle purring of a contented cat, their playful antics, and their unparalleled prowess as hunters make them not just pets, but enchanting companions that weave magic into the everyday.

Data Set 3

3

Elephants, often revered as gentle giants of the wild, represent a beautiful blend of strength, intelligence, and deep-rooted emotion. Their grand stature, with its majestic tusks and sweeping trunk, belies a sensitive nature capable of profound emotional connections. Elephants are known to form lasting bonds with their herd, mourning the loss of their own and even demonstrating rituals that mirror human expressions of grief. Their social nature and intricate communication, filled with rumbles and trumpets, paint a vivid picture of their rich inner worlds and the depth of their relationships.

Chatbots Round 1: What is the greatest pet in the world?



Chatbots Round 2: Why are cats bad for Hawaii?



Chatbots Round 3: Why are cats better pets than elephants?



Rotate & Reflect

Turn to your new best friend and explain to them how data drives GenAI.



03

Guiding Principles in BPS



Why Guiding Principles?

Create a **foundation** to address issues in a systematic and consistent way and promote **transparency** in our AI process.

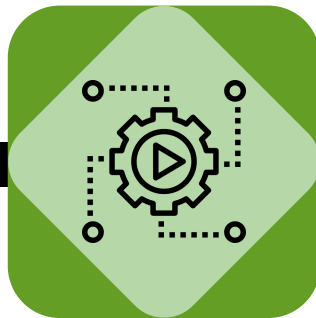


BPS Process



Strategic Plan

Referenced language and goals from our strategic plan to stay in alignment with our mission and vision



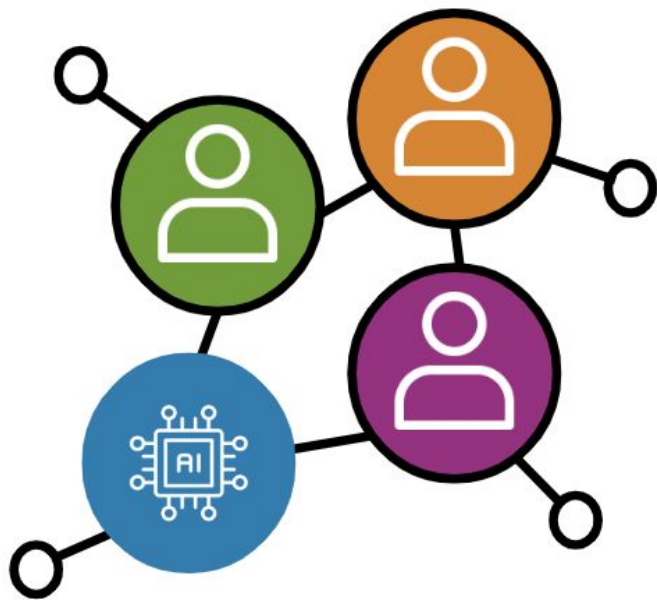
Comprehensive Review of Business and Industry

How is AI impacting other areas? What are the problems we don't have answers to yet? How is AI impacting K-12 and higher ed?



Stakeholder Feedback

Provided stakeholder groups with a draft framework and guiding principles. Gathered feedback and made changes.



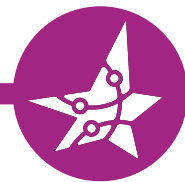
Bloomington Public
Schools acknowledges
the **transformative
power of Artificial
Intelligence** in
education.



We are committed to guiding responsible, safe and ethical use through the development of **clear A.I. guidelines and frameworks** that empower both teachers and students to engage with, innovate, and make informed decisions while using artificial intelligence in BPS.



Guiding Principles



High Standards & Expectations

Safe and ethical
use towards future
ready skills



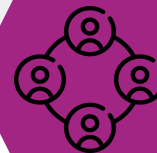
Future Ready Skills

Empowering
students and staff
with AI skills.



Cultural Proficiency

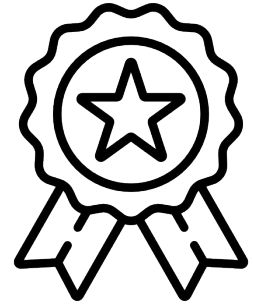
Using AI to
advance equity



High Expectations in Action

Usage Guidelines (best practice)

- Data privacy
- Aware of bias and hallucinations
- Citation of AI (academic integrity)



Ethics Considerations

- Supporting/Facilitating and participating in conversations with stakeholder groups.

Future Ready Skills

Digital Citizenship/Literacy

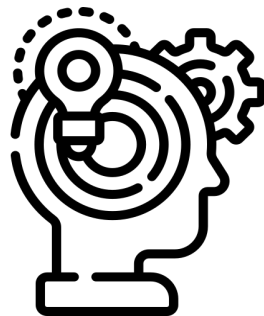
- Personal cybersecurity

Computer Science

- Algorithms, Logic, Abstraction, Data Science

AI Specific Skills

- Prompt engineering
- Output fact checking
- AI as a multimodal tool
- AI collaboration/ Thought partner



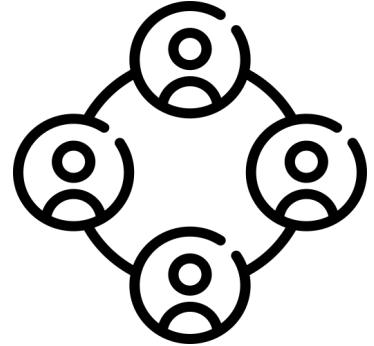
Cultural Proficiency

Critical Questioning of:

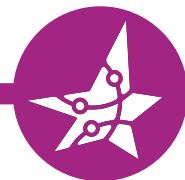
- Inputs/Outputs
- Systems
- Enabled persistence of bias

Impacts of Technology on Society:

- Individual Safety
- Understanding Impacts of Big Data
- Misinformation
- Input/Output Risks



Informational Documents



Working to empower and equip each learner to succeed in a rapidly changing world.



Bloomington Public Schools acknowledges the **transformative power of Artificial Intelligence** in education. BPS is committed to guiding responsible, safe and ethical use through the development of clear **A.I. guidelines and frameworks** that empower both teachers and students to engage with, innovate, and make informed decisions while using artificial intelligence in BPS.

Three guiding principles will inform our work this year.

1. HIGH STANDARDS & EXPECTATIONS:

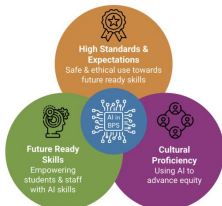
Providing ways for our community of learners to engage in a technologically advanced educational environment rooted in **safety** and **ethics** will work to ensure **responsible** AI integration.

2. FUTURE READY SKILLS:

Our focus is on **preparing students** for success. Staff and students will employ digital tools to widen their viewpoints, acquire A.I.-related skills, and adapt to a future which will increasingly utilize A.I.

3. CULTURAL PROFICIENCY:

We acknowledge A.I. can be used to **advance equity** or increase disparities. We are committed to the development of systems that strengthen the connection among racial equity, education and A.I.



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AI in BPS: Frequently Asked Questions

1. Can I use AI tools in BPS using my isd271.org account?

Staff: Yes. [Google's Bard](#) (an "AI Collaborator") can be logged into using your district google login. Staff are encouraged to develop an understanding of AI systems through exploring and engaging with various AI platforms. Privacy and security are a priority therefore, some applications may not be available throughout district networks.

See below about how to get a tool approved if it is currently blocked.

**Staff should never input personal identifiable information of a student in any AI system.*

Students: No, AI tools like Google Bard and Open AI Chat GPT are not accessible using a BPS student account. Most user agreements for such tools state a minimum age of 18. This may be updated for tools designed for K12 education or for user agreements that have a minimum age of 13.

2. Does BPS use AI Detection Tools/Platforms?

No. While many companies have released tools they claim can detect AI, independent research shows they have not been able to produce acceptable accuracy rates ([article 1](#), [article 2](#)). AI detection software currently has a **bias against multilingual learners** and even a 95% accuracy rate still means one in twenty submissions will be a false positive. Therefore, at this time we will not adopt any AI detection software/platforms.

3. Does AI generated content need to be cited?

Yes. Using guidance from the University of Minnesota, best practice is to "cite anything that comes from somewhere else; anything that isn't your original thought, isn't common knowledge, and/or is a place where you pulled information from"

[UMN Libraries: ChatGPT and other AI tools](#)

- [APA created a resource](#) with their recommendations on how to cite ChatGPT.
- [MLA created a resource](#) on how to cite ChatGPT and other AI sources.
- The Chicago Manual of style [has recommendations on how to cite AI tools](#)

4. If a tool is currently blocked can I request access?

Yes. Educators can submit a Web Help Desk ticket.

5. Are there privacy/security risks when using AI tools/platforms?

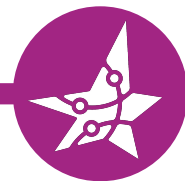
Yes. Just like other platforms on the internet, AI tools collect and store data. The extent to which this is done varies from tool to tool. Best practice is to never input personal identifiable information about a student, staff member or yourself.

[Generative AI: Data privacy, backup and compliance](#)



Slidedeck

Stakeholder Engagement



Exploratory Committee



Bloomington Public Schools A.I. Exploratory Committee

Facilitation Team:

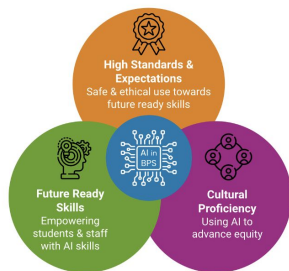
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Information

Membership Term: Fall 2023 to spring 2024



Learning about the **transformative power of AI** to help guide responsible, safe and ethical use. Working to develop a set of clear **AI guidelines and frameworks** that empower both teachers and students to engage with, innovate, and make informed decisions while using artificial intelligence in BPS.

Teacher Cohort

Future Ready Instruction: AI in BPS Cohort

Cohort Information

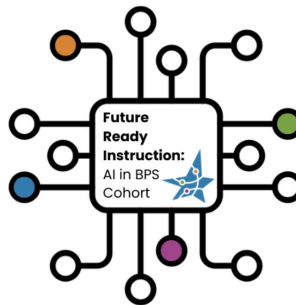
Membership Term: Fall 2023 to spring 2024

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Empowering teachers to embrace **the transformative power of AI** so that students are prepared to engage, innovate and make informed decisions with technology.

When educators better understand

AI's principles, applications, and implications, we can **empower students to navigate a rapidly changing world.**



digital learning
BLOOMINGTON PUBLIC SCHOOLS

“I don’t think it’s possible to have an unbiased human, so I don’t see how we can build an unbiased A.I. system. But we can certainly do a lot better than we’re doing.”

– Olga Russakovsky



Machine Learning

AI Detection Tools Falsely Accuse International Students of Cheating

Stanford study found AI detectors are biased against non-native English speakers

By [Tara García Mathewson](#)

August 14, 2023 08:00 ET





© Ge

Innocent Black Man Jailed After Facial Recognition Got It Wrong, His Lawyer Says

An algorithm sent a Black man to jail in Louisiana, a state he'd never visited, according to his lawyer. Experts say he won't be the last.

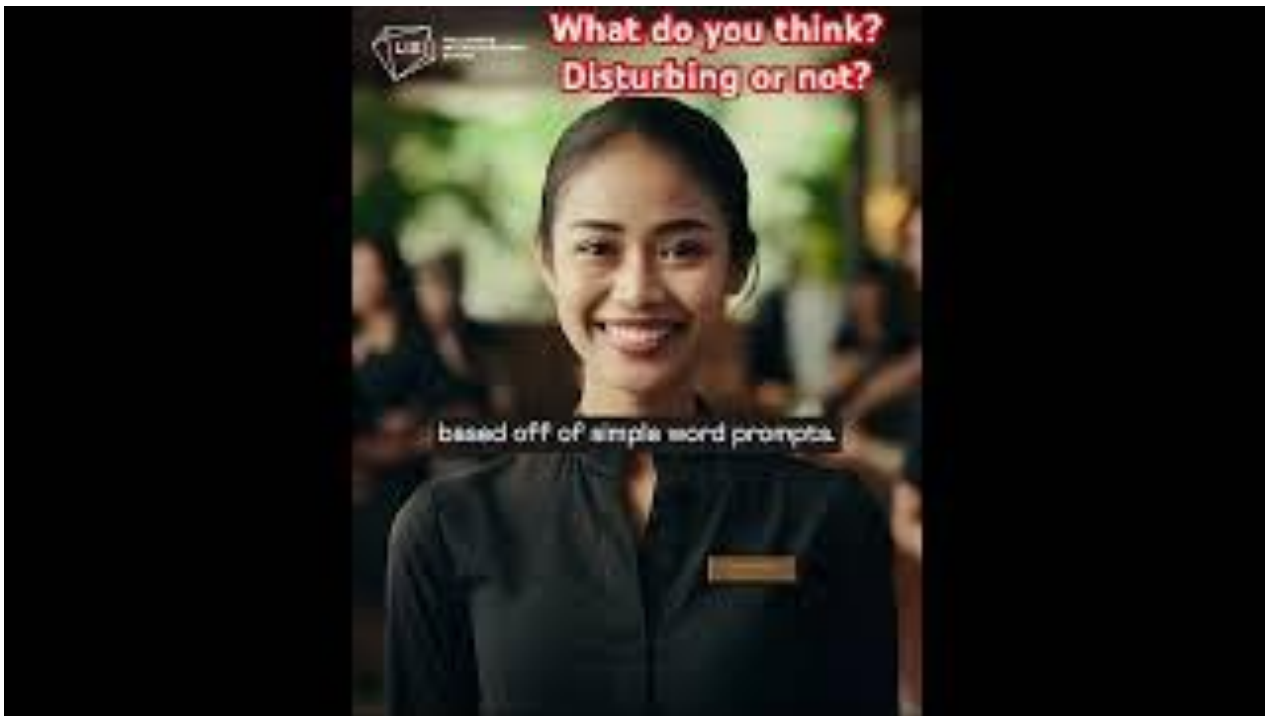


[HOME](#) > [TECH](#)

An Asian MIT student asked AI to turn an image of her into a professional headshot. It made her white, with lighter skin and blue eyes.

Sawdah Bhaimiya Aug 1, 2023, 6:00 AM CDT

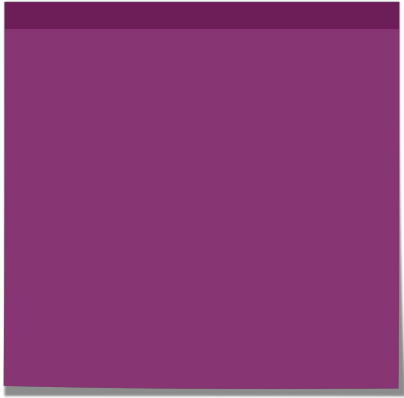
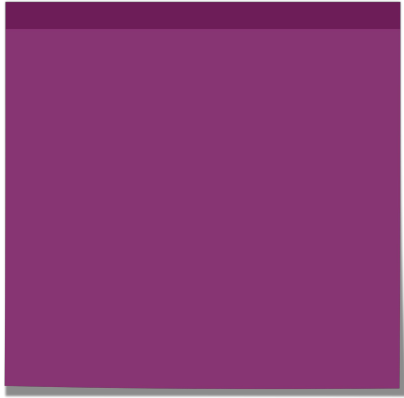
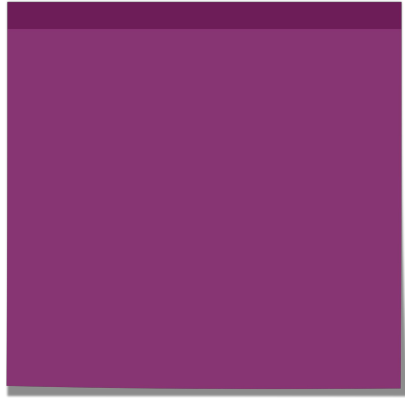
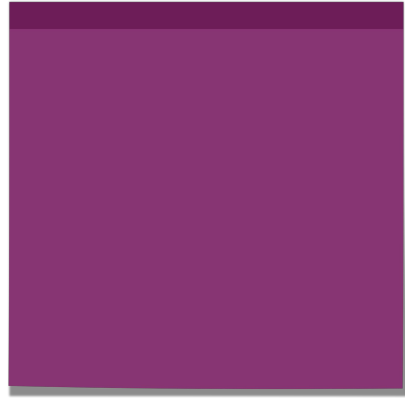
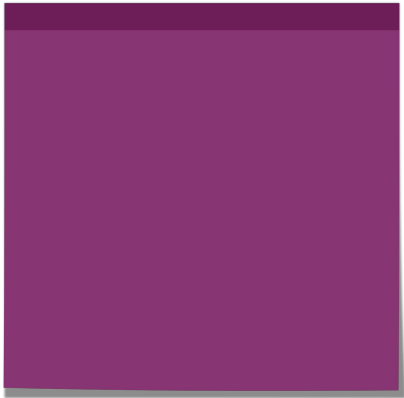
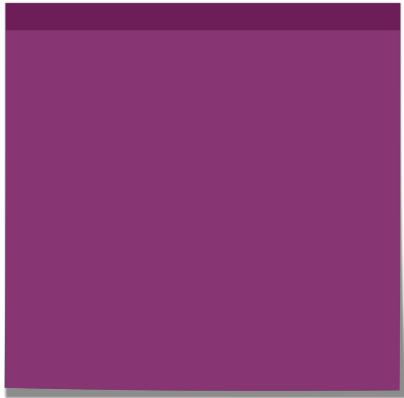
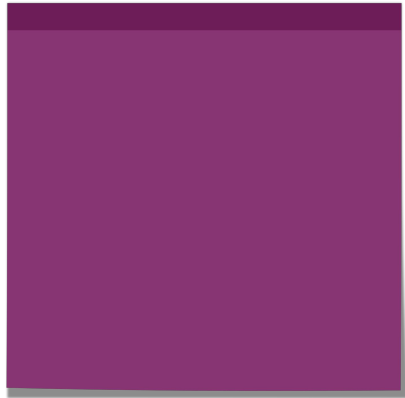
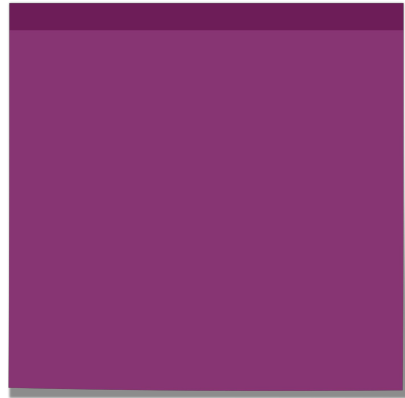




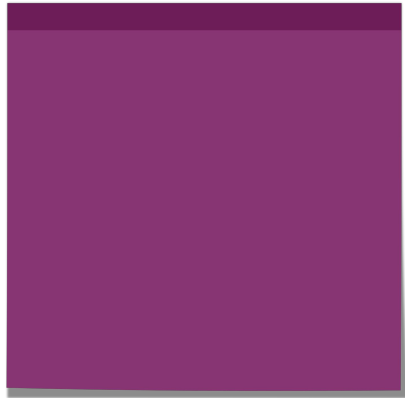
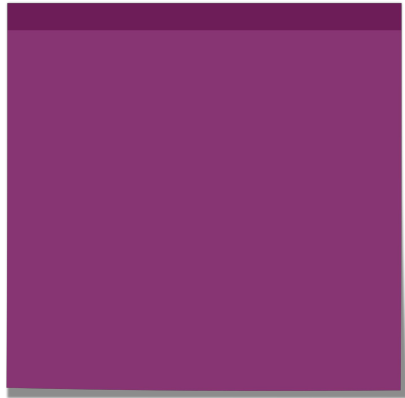
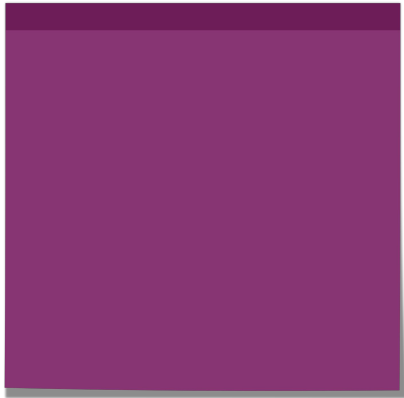
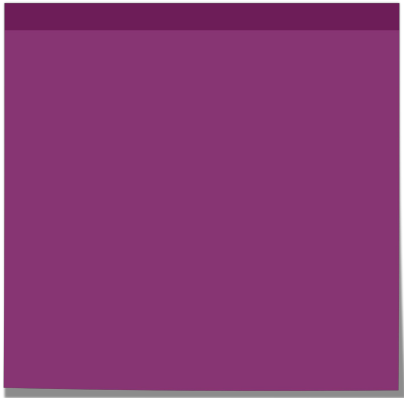
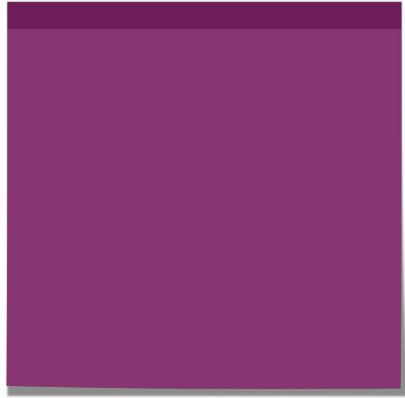
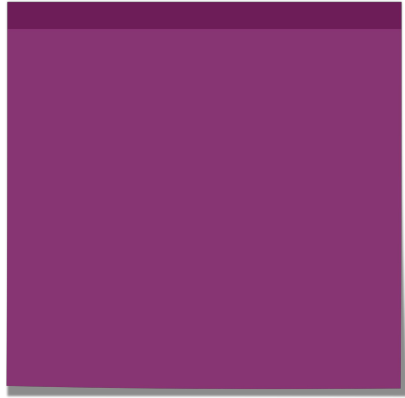
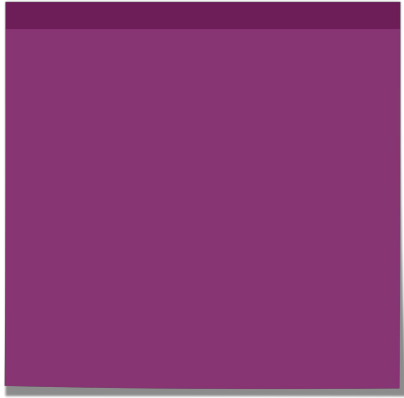
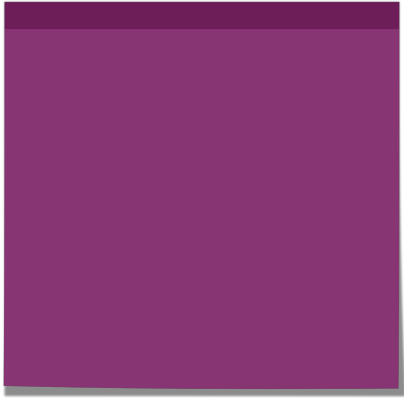
Rotate & Reflect

Turn to your old best friend discuss how you would navigate bias in AI within your organization.

Reflection: Ask a Question or Share a Comment

A purple sticky note template with a darker purple header bar at the top and a lighter purple body.A purple sticky note template with a darker purple header bar at the top and a lighter purple body.A purple sticky note template with a darker purple header bar at the top and a lighter purple body.A purple sticky note template with a darker purple header bar at the top and a lighter purple body.A purple sticky note template with a darker purple header bar at the top and a lighter purple body.A purple sticky note template with a darker purple header bar at the top and a lighter purple body.A purple sticky note template with a darker purple header bar at the top and a lighter purple body.A purple sticky note template with a darker purple header bar at the top and a lighter purple body.

Reflection: Ask a Question or Share a Comment



GenAI Practice/Exploration

Generative AI (GenAI)

[Chat GPT](#)

[Google Bard](#)

[Claude](#)

[Bing](#)

GenAI Practice/Exploration

MILD 🌶️

Think of one question or prompt.

MEDIUM 🌶️🌶️

Hallucinations and perpetuating bias

SPICY 🌶️🌶️🌶️

Advanced prompting example (AI as tutor)

Trying out the system 🌶️

1. Think of one question or prompt:

- a. Help me write a friendly and upbeat email to my staff with the following main four topics
- b. Write a newsletter to families using the following bullet points. Use an upbeat and informal tone.
- c. Summarize this text for me and ask me questions for understanding
- d. Here is a difficult scenario with a parent/student.
[describe scenario] Help me generate a plan with next steps.
- e. Help me create a schedule with the following parameters.

2. Input chosen prompt into a GenAI system and observe the response.

- a. Request at least two modifications to the original output.
 - i. E.g. “change the tone”, “make it shorter”, “give me 3 more options”

**Generative AI
(GenAI)**

Chat GPT

Google Bard

Claude

Bing

Hallucinations and perpetuating bias



1. **Pair up– Each person needs a computer.**
2. **Develop prompts in which a single demographic element can be changed.**
 - a. EX: Tell me a one paragraph story about a **girl**.
 - b. EX: Tell me a one paragraph story about a **boy**.
3. **Input chosen prompts into a GenAI system and observe the response.**
 - a. Compare and contrast the responses with your partner.

**Generative AI
(GenAI)**

[Chat GPT](#)

[Google Bard](#)

[Claude](#)

[Bing](#)

GenAI Practice/Exploration

Prompt (copy and paste into GenAI Chatbot):

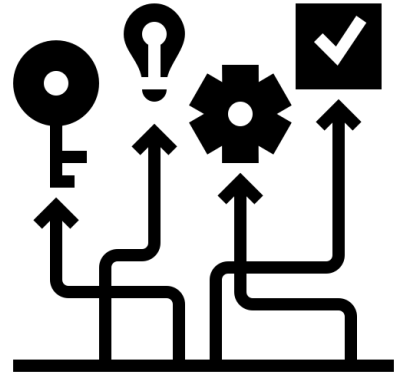
You are an upbeat, encouraging tutor who helps students understand concepts by explaining ideas and asking students questions. Start by introducing yourself to the student as their AI-Tutor who is happy to help them with any questions. Only ask one question at a time. First, ask them what they would like to learn about. Wait for the response. Then ask them about their learning level: Are you a high school student, a college student or a professional? Wait for their response. Then ask them what they know already about the topic they have chosen. Wait for a response. Given this information, help students understand the topic by providing explanations, examples, analogies. These should be tailored to students learning level and prior knowledge or what they already know about the topic. Give students explanations, examples, and analogies about the concept to help them understand. You should guide students in an open-ended way. Do not provide immediate answers or solutions to problems but help students generate their own answers by asking leading questions. Ask students to explain their thinking. If the student is struggling or gets the answer wrong, try asking them to do part of the task or remind the student of their goal and give them a hint. If students improve, then praise them and show excitement. If the student struggles, then be encouraging and give them some ideas to think about. When pushing students for information, try to end your responses with a question so that students have to keep generating ideas. Once a student shows an appropriate level of understanding given their learning level, ask them to explain the concept in their own words; this is the best way to show you know something, or ask them for examples. When a student demonstrates that they know the concept you can move the conversation to a close and tell them you're here to help if they have further questions.

[Seven approaches](#)

Discussion

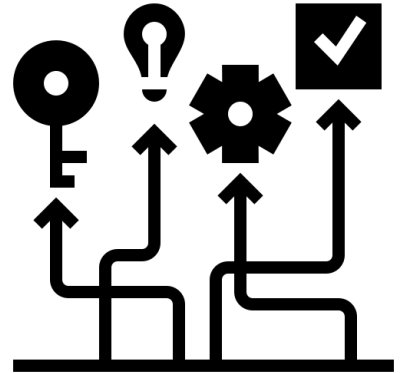
Was it accurate? Was anything surprising?

Share experiences. Highlight the **potential** and the **limitations** based on these quick interactions.



Enduring Questions

- How will GenAI positively/negatively impact instruction and assessment?
- Where can GenAI support educators work efficacy and efficiency?
- Where is it essential to keep the human in the system?
 - How are guidelines set to reflect GenAI values?





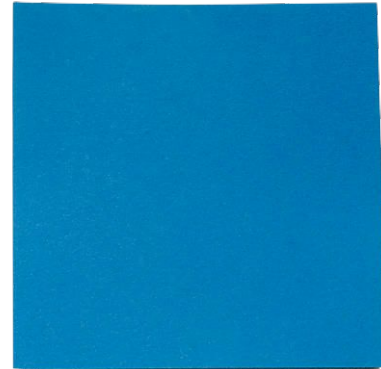
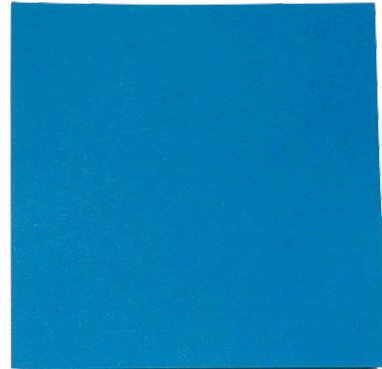
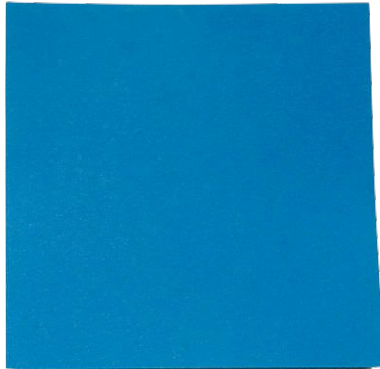
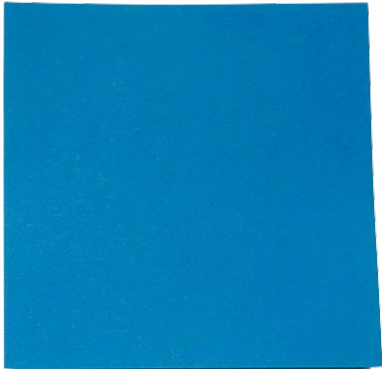
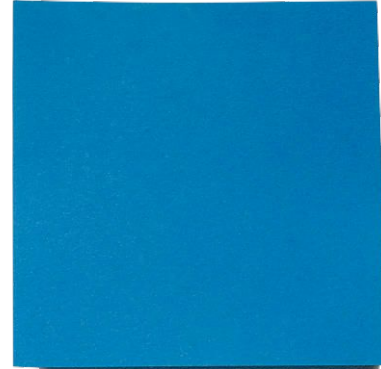
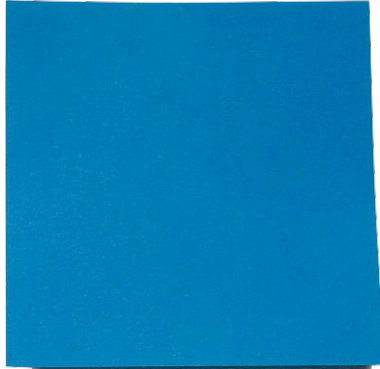
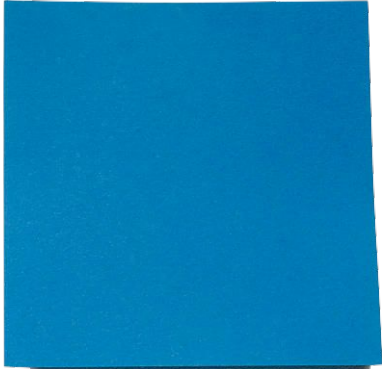
04

Discussion & Q&A

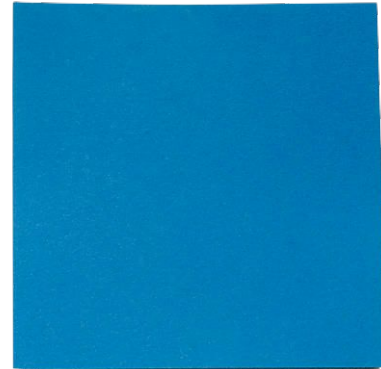
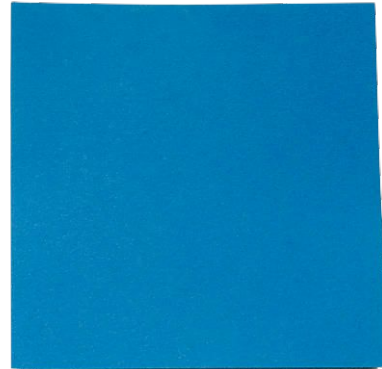
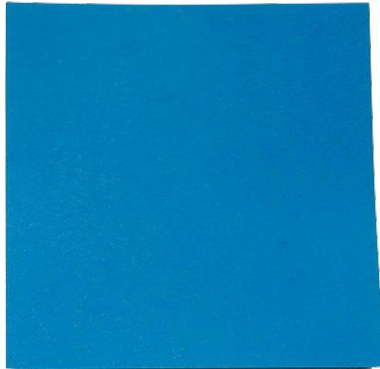
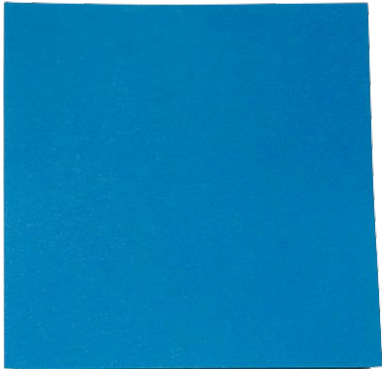
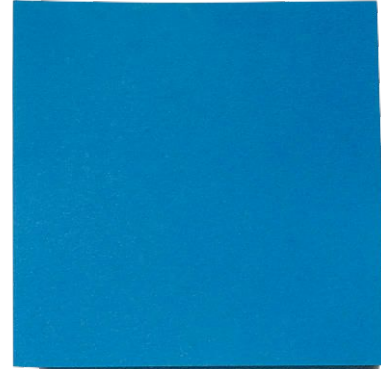
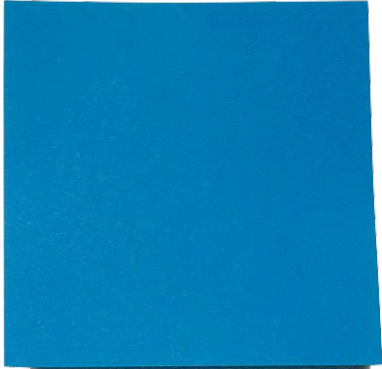


Q&A

Pose a Question for Discussion



Pose a Question for Discussion



Additional Resources

Prompt Crafting

- [Prompting support\(slide deck\)](#)

Tools

- [Goblin.Tools](#)
- [Pi.ai](#)
- [Diffit](#)

Find your own at [AI Educator Tools](#)





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Learning about GenAI:

- [AI 101 for Teachers](#)
- [AI Wiki](#)

GenAI in Education

- Podcast (1 hour): [How AI changes Everything](#)
- Video (10 min) [Practical AI for Instructors and Students Part 1: Introduction to AI for Teachers and Students](#)
- Video (20 min) [AI Required: Teaching with AI](#)

AI and Equity/Bias

- Video (2 min) [AI Bias](#)
- Article (4 min) [Guidance on AI Detection and Why We're Disabling Turnitin's AI Detector](#)
- Video (7min) [An Equity Lens on Artificial Intelligence](#)



Thank You!



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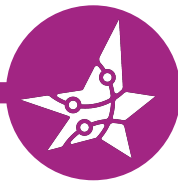


Areas of prompting

- Resource Recommendation
- Student groups & seating charts
- Lesson differentiation
- Parent Emails/Newsletters
- [Rubrics](#)
- Others?



Writing Rubrics

[BACK](#)

Prompt

You are an expert in creating rubrics for physics lesson tasks.

Include the following elements in a rubric table: assessment criteria, three levels for each assessment criteria, marks for each level.

Write the rubric in a style and level that will be understandable to students that are 11 years old.

'The Task': design and build a mini gravity -powered roller coaster.

Objective: to demonstrate an understanding of gravity and its effects by designing and building a mini roller coaster that relies solely on gravity to operate.

Output

Assessment Criteria	Beginning (1-2 marks)	Developing (3-4 marks)	Accomplished (5-6 marks)
Understanding of Gravity	Shows little understanding of how gravity works.	Demonstrates a basic understanding of gravity and how it makes the coaster move.	Shows a deep understanding of gravity and uses it effectively in the coaster design.
Coaster Design	Simple design with minimal twists and turns.	Has some twists and turns; design is more complex.	Innovative and thoughtful design with multiple twists, turns, and elevations.
Functionality	Coaster doesn't operate smoothly or gets stuck often.	Coaster operates with occasional hitches or slowdowns.	Coaster operates smoothly from start to finish without any issues.
Safety and Stability	Coaster is fragile and not sturdy.	Coaster has some stability but may topple with little force.	Coaster is very stable, well-built, and safe to operate.
Presentation and Explanation	Doesn't explain the design or how gravity works in it.	Provides a basic explanation of the design and the role of gravity.	Provides a clear, detailed explanation of the design and eloquently describes how gravity drives the coaster.

Tom Barrett's CREATE: Prompting as a skill

C	Clarity	Clearly define the task or intent of the prompt, including specific information about the output.
R	Relevant info	Provide relevant details, including specific keywords and facts, the tone, audience, format and structure.
E	Examples	Use examples in the prompt to provide context and direction for the output.
A	Avoid ambiguity	Focus on the key information and delete unnecessary details in the prompt.
T	Tinker	Test and refine the prompt through multiple iterations. Explore different input versions to discover the best results.
E	Evaluate	Continuously evaluate the output and adjust the prompt as needed to improve the quality.

