AI Planning & Usage in AAPS Teaching & Learning Environments

Board of Education
October 23, 2024

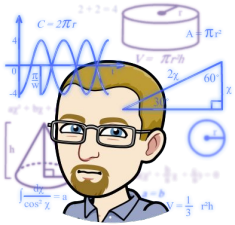
Fall Preview

ANN ARBOR PUBLIC SCHOOLS
LEAD. CARE. INSPIRE.

Who Are We?

Kaytee Bellows

Instructional Technology Consultant for Secondary Schools



Chris Thomas

Teacher & Instructional Technology Consultant for Secondary Schools

Melissa Gordon

Huron High Business/CTE Teacher

Heather Kellstrom

Executive Director of Instructional Technology & Information Systems

2023-24 TLN AI Study Group: *Jenn Colby, Heather Kellstrom, Jenna Bacolor, Chad Bickel, Rian Burke, Anne Callison, John Creal, Sharell Elam, Bruce Geffen, Melissa Gordon, William Harris, Sangeetha Janakiraman, Nicole Lemon, Mike Lovelace, S.L. Morningstar, Jeff Oleksinski, Ryan Silvester, Amita Singla, Josh Skodack, Chris Thomas, Dan Trevisan, Amy Van Appledorn, Mary Walker, Marie Whybark, Sarah Wroblewski.*

Cabinet Team: *Jazz Parks, Shonta Langford, Dawn Linden, Concetta Lewis, Bernie Rice, Jenna Bacolor, Roberta Heyward, Melita Alston, Liz Margolis, Kia Hagens, Holly Scherer, Heather Kellstrom, Andrew Cluley, Amy Osinski, Caryn Soderberg.*

Classroom Visits/Voices to Date:
Melissa Gordon - Business, Huron HS
Amy Van Appledorn - Social Studies, Pioneer HS
Casey Warner - Science, Skyline HS
Chris Thomas - Science 7 & 8, Scarlett MS

External Thought Partners: *Michigan Virtual, Michigan Association for Computer Users in Education (MACUL), International Society for Technology in Education (ISTE), Oakland Schools ISD, Kent ISD, Grosse Pointe Schools, Northville Public Schools, Vendor Partners.*

A2 Virtual, Secondary Librarians, ITC Team, ITD Team.

Session Learning Targets

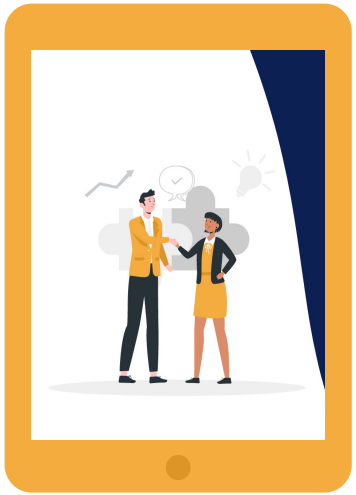
01 AI Fundamentals

02 Where Have We Been?

03 Where Are We Now? Headed Next?

04 How Will We Know We've Made It?

In The Last Week, Have You...



- Watched a show that was recommended by Netflix, Hulu or Prime?
- Asked Siri, Alexa or Google Assistant a question?
- Used Google Maps, Waze or Apple Maps to give you directions?
- Purchased something that you saw on social media?
- Used autocorrect or grammar suggestions?

Inclusion Activity

01

AI Fundamentals

Technology Mimicking Human Intelligence

Artificial Intelligence...is technology programmed to mimic human intelligence. AI allows machines to learn, adapt, and perform tasks like humans.

REACTIVE

Tools that respond to specific ***"inputs"*** without learning from past experiences.

PREDICTIVE

Tools that analyze historical data and experiences to predict future events or behaviors.

GENERATIVE

Tools that generate new content or ***"outputs"*** from learned patterns.

Why Should Students Use AI?

SUPPORT LEARNING

Real-time access to **learning support** (feedback, planning, guidance).

Resources for **remediation** and **extension**.

ETHICAL GUIDANCE

Learn about AI systems and **how to use them to learn**.

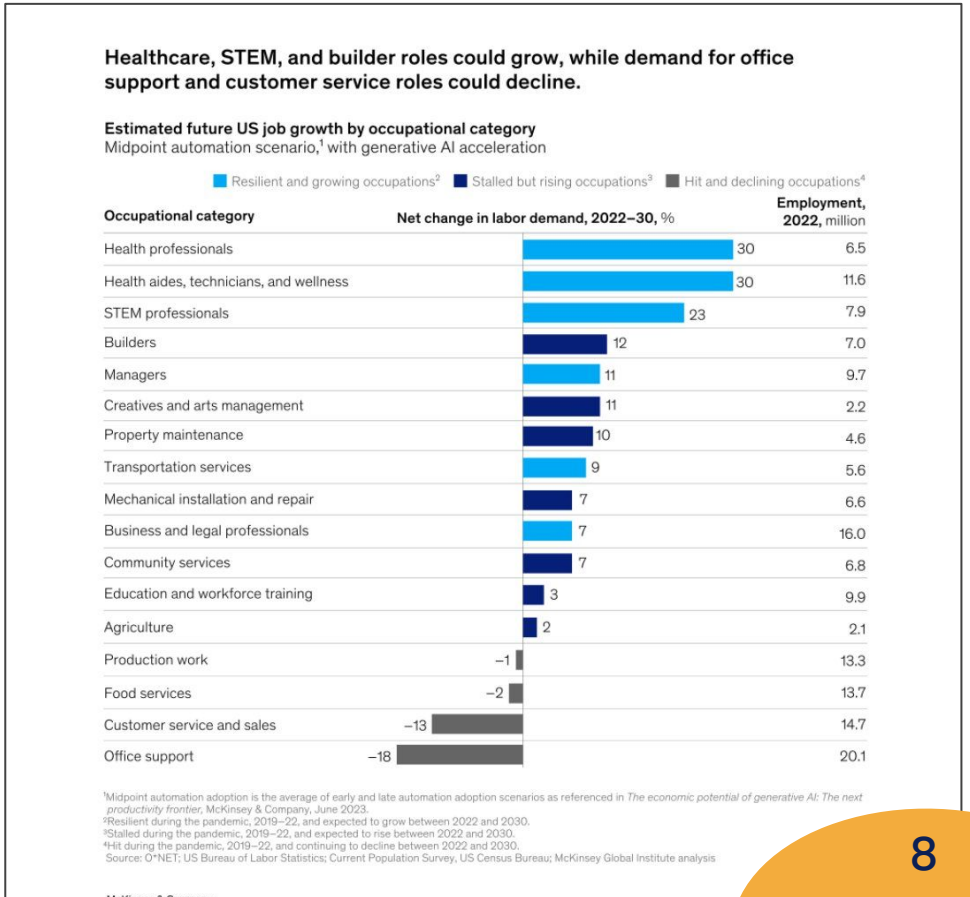
Practice using AI systems in a **safe space** with human **mentorship**.

CAREER PREPARATION

Develop **highly-desirable skills** for the workforce.

Prepare for **effective use of AI systems** in a career.

AI & The Future of Work for Students



1 out of 3 companies are already using GenAI.

An estimated **30%** of hours currently worked could be automated using GenAI by 2030.

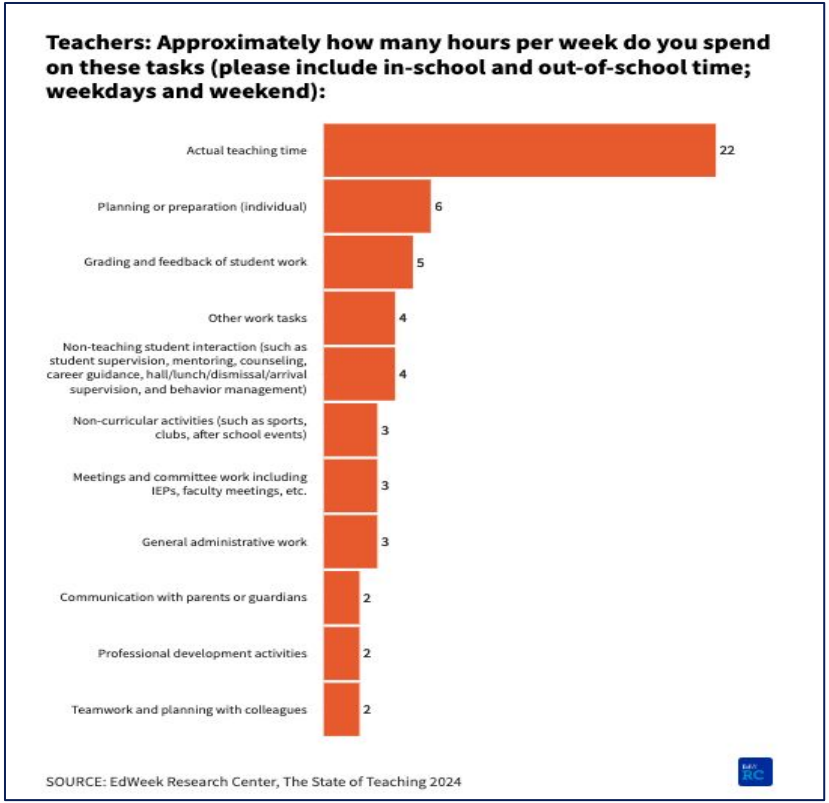
GenAI will change job growth in many industries.

Are we preparing our students for this future?

AI Potential Impacts on Teaching

Teacher Skills

- Curriculum Development
- Lesson Planning
- Grading
- Feedback
- Communication
- More Time for **Human Interaction**



Rapid Growth of AI...It's Here to Stay!

Capabilities of AI

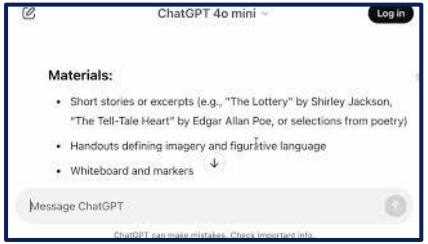
- Generates new text/images/video
- Multilingual comprehension and response
- Synthesizes in secs/mins
- Modifies responses from user feedback
- Learns from extensive training
- Still an emerging technology and constantly improving

Prompts Matter for Desired Outputs!

01

Set the Scene

State Role & Context



02

Be Specific

Define Chatbot Task & Provide Details

03

Simple Language

Explain "X" like I'm a 5th Grader

04

Structure Output

Tell Chatbot How to Structure the Answer

05

Share Feedback

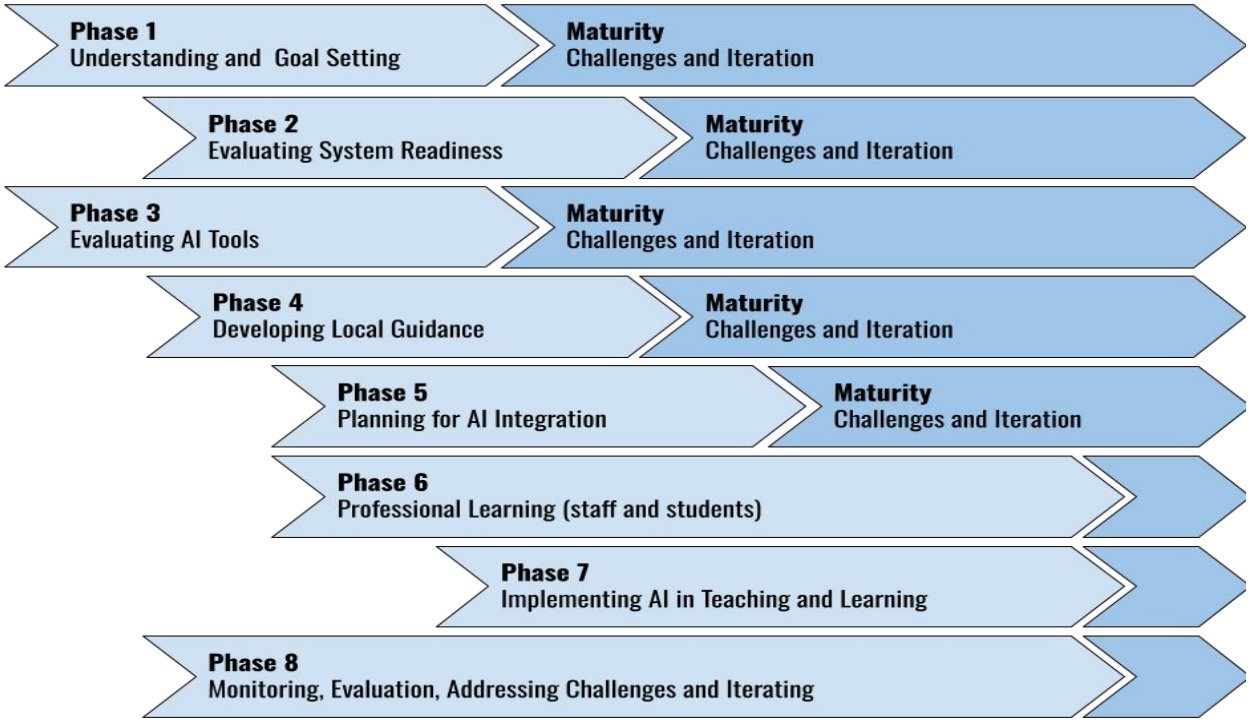
Provide Chatbot Feedback to Improve Each Output

02

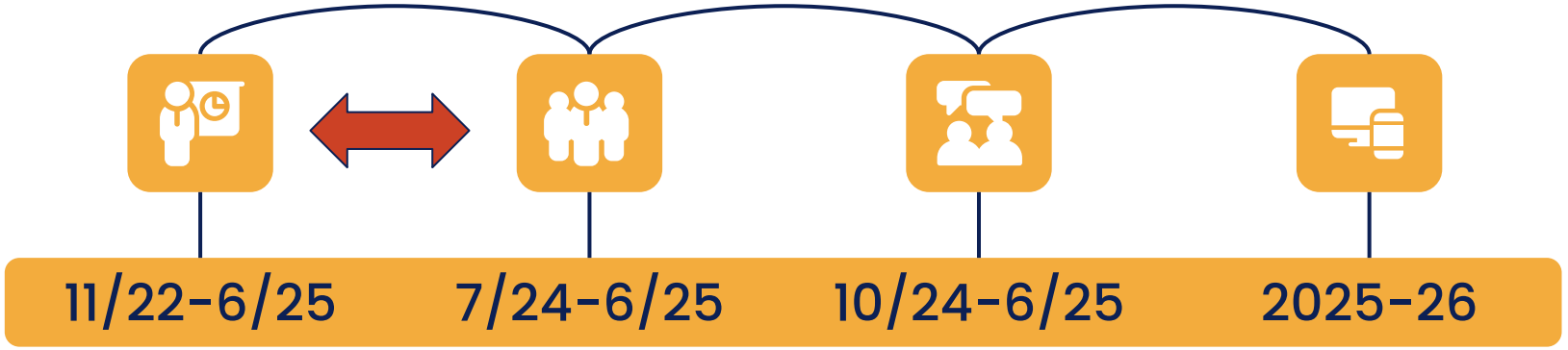
Where Have We Been?

Connections to Equitable Framework

DRAFT: AI Planning Guidance Timeline



AAPS AI Roadmap



Learners

All Things AI for Staff PD & Classroom Trials of AI

Collaborators

Stakeholder Engagement, Student Advisory Team(s), More Learning, Trials & Feedback Loops

Co-Creators

Development of AI Bill of Rights, High-Quality AI Use Cases & More PD

Digital Leaders

AAPS AI Goals, Guidelines/Policy, Scalable Teaching Workflows & Ongoing Feedback Loops

AAPS Points of Pride - Early Adopters

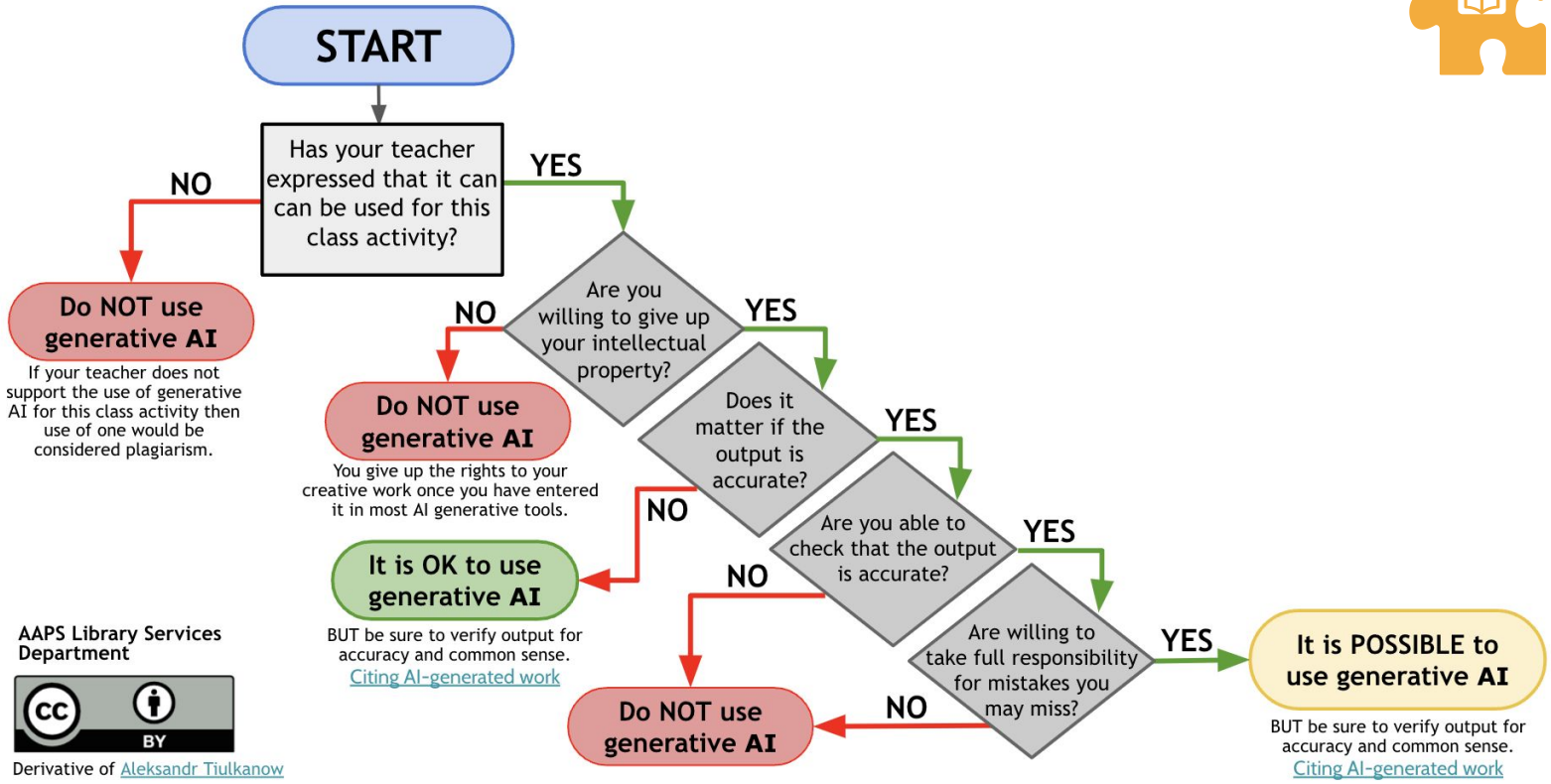
School Librarians
Staff How to AI &
Students Should I AI

Staff PD
August ELA PD &
On-Demand Staff AI PD

CTE Business Class
AI Design & Usage

IBSOM FALL SYMPOSIUM
Jennifer Colby & Melissa Gordon, Huron High

Should you use generative **AI** for your classwork?



AAPS Library Services Department

CC BY

Derivative of Aleksandr Tiulkanow

Back to School Staff PD on AI

Let's Practice Prompting using our GUIDE!

1. **Design a prompt** for **ChatGPT to generate an engaging lesson hook** for a topic needing more student buy-in.
2. **Plug your prompt into ChatGPT** (or other LLM) to create the lesson hook.
3. **Notice you can share the AI transcript link** (includes your prompt and AI response)

GUIDE YOUR PROMPT FOR BETTER RESULTS

- **GOAL**: The specific topic or unit you are introducing to your class
- **UNDERSTANDING**: Explain why the topic or unit is typically not er students
- **INSTRUCT**: Ask the AI to incorporate student interests and list them out
- **DETAILS**: The type of format you want for the lesson hook - slideshow, game, hands-on activity, science demo, etc.

Limitations & Potential Risks

- **Knowledge limits**
- Echoes **biases** from internet data
- **Hallucinates** incorrect information confidently
- Doesn't always understand **context**
- **Different outputs** with same prompt
- **Unpredictable & untraceable** outcomes

EXAMPLE: Communicating Acceptable AI Use

Graphic to **scaffold AI as an assistant**: "Classroom AI Use: What's Cheating? What's OK?"

Prompt Engineering

- Don't use chatbots like a search engine. Instead...
- **Prompt engineering** is the practice of crafting effective prompts to elicit desired responses from AI models

Melissa Gordon - Huron HS - CTE Teacher

Experience Using AI in Classroom

Content Creation

- Developing more engaging lessons, activities, rubrics, and projects
- Re-leveling activities and **personalized learning**
- Asking for feedback about a future lesson (Most common misconceptions and how can I address those before the lesson?)

Saving Time

- Creating a lesson in an hour vs. 5-6 hours = **Spending more time engaging with students**

Student Opportunities

- Students assess their work and compare it to AI-generated exemplars: “Below average”, “Meets expectations”, and “Exceeds expectations”
- Students respond to carefully crafted questions generated by multiple AI systems, focusing on the **process** of learning, their **Depth of Knowledge** (DOK), **inquiry**, and **reflection** activities to deepen their understanding

Educational Paradigm Shift

Think about AI entering the education game back to the time when wide access to calculators came to be.

AI as a Resource Tool

Like calculators, AI should be viewed as a **helpful tool, not a replacement** for learning.

Support, Privacy & Safety

Focus on teaching others to use AI **appropriately and safely**.

Shift from Product to PROCESS

Emphasize the **learning process** over just the final product.

Clear Use Guidelines

Empower educators while enhancing learning and protecting rights and well-being.

SWOT of AI Use in K-12 Education

STRENGTHS

Personalized Learning, Automated Tasks, Real-Time Feedback, Intelligent/Adaptive Tutoring Systems, Enhanced Accessibility

WEAKNESSES

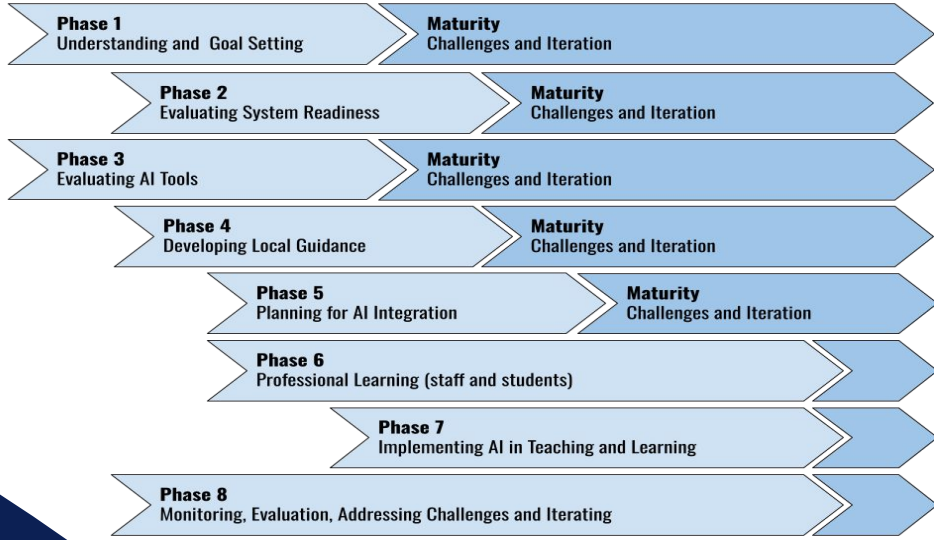
Costs, Lack of Human Interaction, Technical Challenges, Lack of Teacher Training, Ethical Concerns, Equitable Access

OPPORTUNITIES

Enhanced Learning Analytics, Personalized Career Guidance, Efficient Resource Allocation, Lifelong Skills, Upskilling

THREATS

Technological Dependence, Algorithmic Bias or Discrimination, Ethical Decision-Making, Data Privacy/Security, Academic Integrity

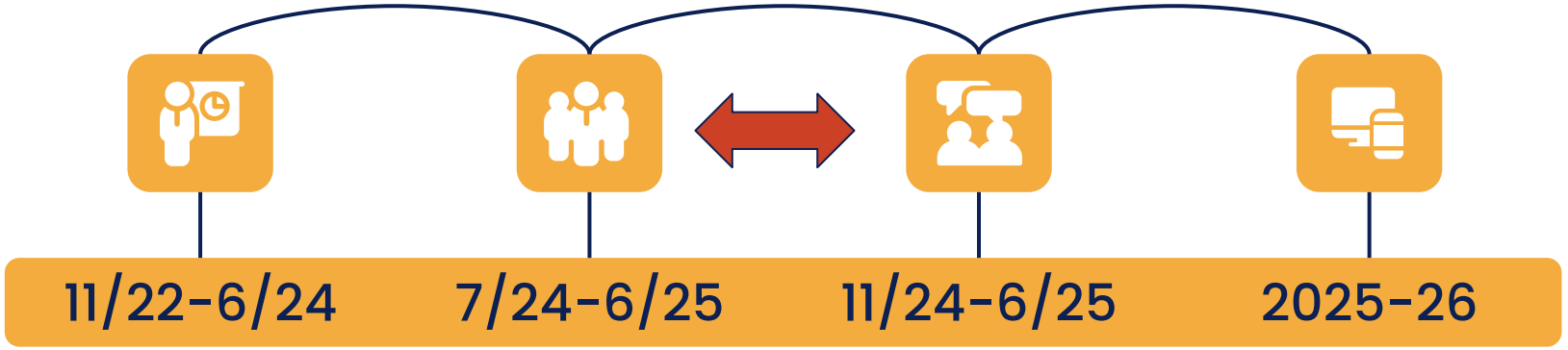


03

Where Are We Now? Headed Next?

Voices, Use Cases & Artifacts Will Tell The Story

AAPS AI Roadmap



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Setting Foundational AI Conditions

2024-25 SY Guidance

- "Draft" Conditions of Effective Use for Staff
- "Draft" Conditions of Effective Use for Students
- Growing Points of Pride of AI Lesson Design and/or Classroom Use
- AI PD Pathway Options
- Engaging with Teachers, Students and Families
- Ongoing FAQs to Keep All Stakeholders Informed

AAPS AI Best Practice DRAFT Guidance - Staff

PURPOSE

Ensure the thoughtful integration of AI within the teaching and learning experience while centering students with the supports to be successful learners.

DRAFT ONE-PAGER

Intended to be used to provide example guidance/guardrails while the ITC Team works with in partnership with stakeholders to identify and articulate clear goals, policy integration and best practices.

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Artificial Intelligence (AI) in Teaching and Learning

NEED TECH HELP?
734-994-5040 (8AM-4PM)
INCIDENT IQ ANYTIME HERE

BEST PRACTICES AND AI IN TEACHING AND LEARNING

Our Purpose is to ensure the thoughtful integration of AI usage within the teaching and learning environment while centering student dignity, belonging, and well-being to support successful learners.

Welcome! This document provides example guidelines and examples of policies surrounding AI use, while AAPS works collaboratively with all stakeholders to identify and articulate clear goals, policy integration, and best practices.

COMMUNICATING ACCEPTABLE USE	GUARDRAILS FOR ACCEPTABLE USE
AAPS Student Best-Practices for Using AI	DRAFT: AAPS AI Bill of Rights for teachers and students to consider and support best practices
AAPS Data Privacy Best Practices	AAPS Technology Acceptable Use Guidelines for Staff and Students
Age-Appropriate Use of AI Across Developmental Stages here	AAPS Student, Teacher, Staff, Parent/Guardian Rights and Responsibilities
Stop Light based system to communicate expected student AI use: Generative AI Acceptable Use Scale	
Teaching Systems Lab's infographic on how AI can be used to enhance instruction - Teachers on AI	**POSSIBLE GUIDELINES FOR IDENTIFYING STUDENT WORK PRODUCED WITH AI**

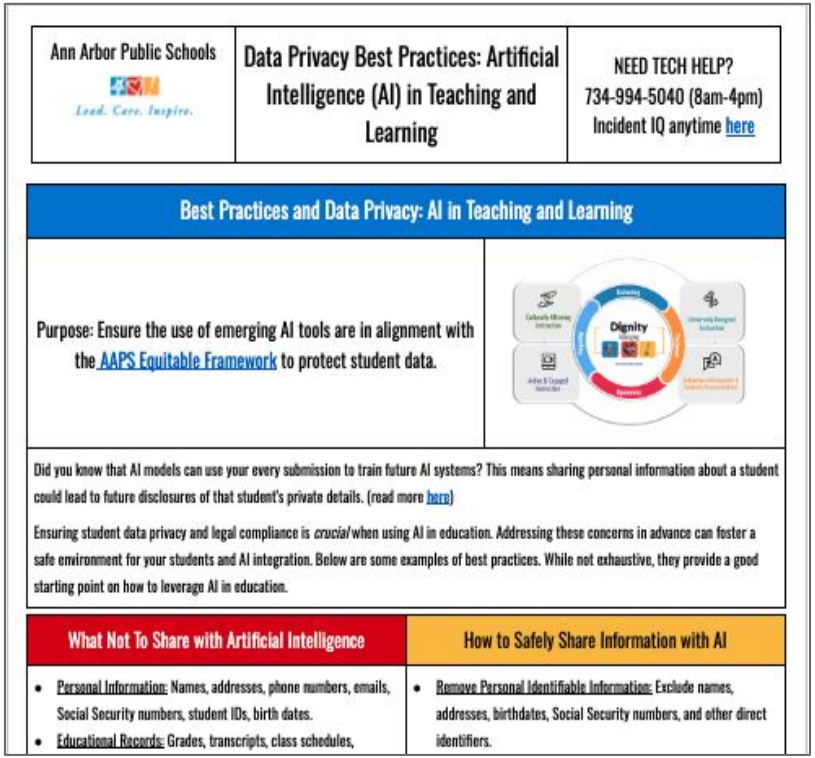
AAPS AI & Data Security DRAFT Recommendations

PURPOSE

Ensure the use of emerging AI tools that are aligned with the AAPS Equitable Framework to protect student privacy and data.

DRAFT ONE-PAGER

Ensuring student data privacy and legal compliance is crucial when using AI in education. Addressing these concerns in advance can foster a safe environment for students and future AI integration.



Ann Arbor Public Schools Lead. Care. Inspire.	Data Privacy Best Practices: Artificial Intelligence (AI) in Teaching and Learning	NEED TECH HELP? 734-994-5040 (8am-4pm) Incident IQ anytime here

Best Practices and Data Privacy: AI in Teaching and Learning

Purpose: Ensure the use of emerging AI tools are in alignment with the AAPS Equitable Framework to protect student data.

Did you know that AI models can use your every submission to train future AI systems? This means sharing personal information about a student could lead to future disclosures of that student's private details. (read more here)

Ensuring student data privacy and legal compliance is *crucial* when using AI in education. Addressing these concerns in advance can foster a safe environment for your students and AI integration. Below are some examples of best practices. While not exhaustive, they provide a good starting point on how to leverage AI in education.

What Not To Share with Artificial Intelligence	How to Safely Share Information with AI
• Personal Information: Names, addresses, phone numbers, emails, Social Security numbers, student IDs, birth dates. • Educational Records: Grades, transcripts, class schedules,	• Remove Personal Identifiable Information: Exclude names, addresses, birthdates, Social Security numbers, and other direct identifiers.

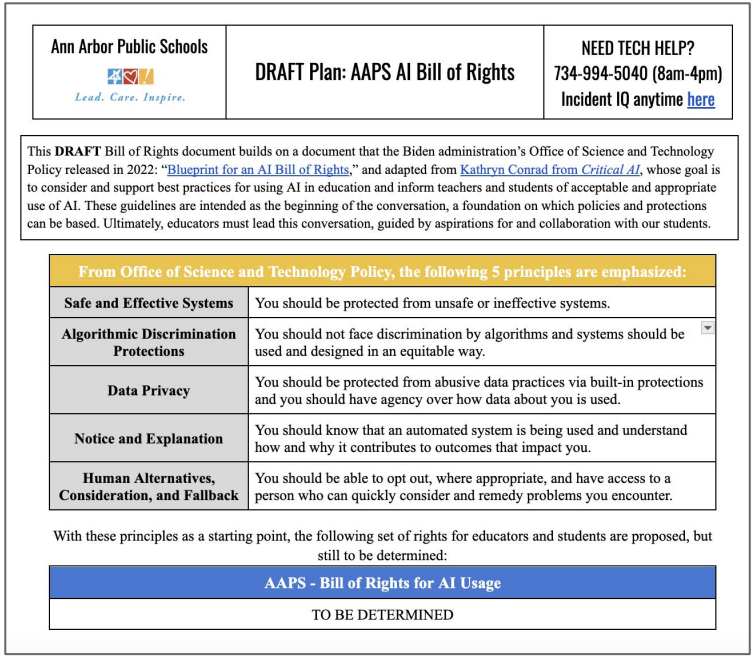
AAPS AI Bill of Rights DRAFT

PURPOSE

Ensure that all students and educators benefit from the ethical and equitable use of artificial intelligence technologies in a teaching and learning setting.

DRAFT ONE-PAGER

Aims to protect individuals' privacy, promote transparency and prevent algorithmic discrimination or bias in AI applications, fostering an inclusive learning environment.



Ann Arbor Public Schools Lead. Care. Inspire.	DRAFT Plan: AAPS AI Bill of Rights	NEED TECH HELP? 734-994-5040 (8am-4pm) Incident IQ anytime here

This **DRAFT** Bill of Rights document builds on a document that the Biden administration's Office of Science and Technology Policy released in 2022: "Blueprint for an AI Bill of Rights," and adapted from Kathryn Conrad from *Critical AI*, whose goal is to consider and support best practices for using AI in education and inform teachers and students of acceptable and appropriate use of AI. These guidelines are intended as the beginning of the conversation, a foundation on which policies and protections can be based. Ultimately, educators must lead this conversation, guided by aspirations for and collaboration with our students.

From Office of Science and Technology Policy, the following 5 principles are emphasized:	
Safe and Effective Systems	You should be protected from unsafe or ineffective systems.
Algorithmic Discrimination Protections	You should not face discrimination by algorithms and systems should be used and designed in an equitable way.
Data Privacy	You should be protected from abusive data practices via built-in protections and you should have agency over how data about you is used.
Notice and Explanation	You should know that an automated system is being used and understand how and why it contributes to outcomes that impact you.
Human Alternatives, Consideration, and Fallback	You should be able to opt out, where appropriate, and have access to a person who can quickly consider and remedy problems you encounter.

With these principles as a starting point, the following set of rights for educators and students are proposed, but still to be determined:

AAPS - Bill of Rights for AI Usage
TO BE DETERMINED

Collecting Street Data to Inform the Essential Q's Driving the Current Need

01 *How can schools use AI to support student learning?*

02 *How can schools prepare students with the skills to thrive in an AI-infused world?*

03 *How can AI support educators, both in teaching and by freeing up time to allow them to focus on students?*

04 *What are other district use cases for AI integration outside of the teaching and learning environment?*

Lesson Plan Overview - AI in the Business Classroom

We looked at job descriptions, resumes, and cover letters from both the employer and employee perspective.

- Resumes and Cover Letter Introduction (1 day)
- Inquiry Activity: (2-3 Days)
  - In groups, students were given an AI generated job description. They were asked to highlight words they didn't know and to write a list of questions they had about it. (discussion followed)
  - They answered AI generated questions about the job post in their groups (discussion followed)
  - They were then given 3 AI generated resumes and cover letters: Michael Green, Sarah Thompson, and Emily Johnson. They were asked to list the candidates in order of the person they most wanted to interview to the candidate they least wanted to interview, and to defend their choices. (a class debate then occurred--not everyone had the same order so it was great to see what people valued more--skills or education/experience and who paid attention to the job description provided)
  - Next they were asked to craft their own resume (a fake one as a group) for the ideal candidate and present it to the class--what was similar, different, etc?
- Resume Rough Draft--resume template they had to fill in with their own information (1 day)
- School AI Resume Chatbot--they had to go through the chatbot created in SchoolAI that reminded them of safety concerns about using AI, privacy and what to share, and then the different parts of the resume. (1-2 days)
- Final Copy & Reflections (1-2 days)

04

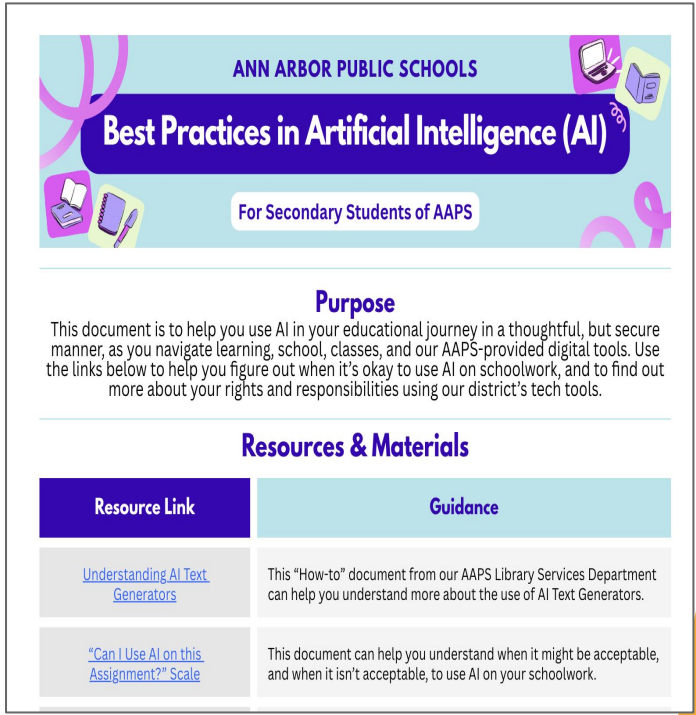
How Will We Know We Made It?

Voices, Use Cases, & Artifacts Will Tell The Story

What Success Looks & Feels Like

2025-26 SY Guidance

- BOE Stamped AAPS AI Positional Statement
- BOE Approved AI Policy with a Human-Centric Approach
- AAPS Co-Constructed AI Bill of Rights
- Participation in AI PD Pathways for Staff, Students & Families
- Substantive Points of Pride of AI Lesson Design & Classroom Use
- Ongoing FAQs to Keep Stakeholders Informed



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Best Practices in Artificial Intelligence (AI)

For Secondary Students of AAPS

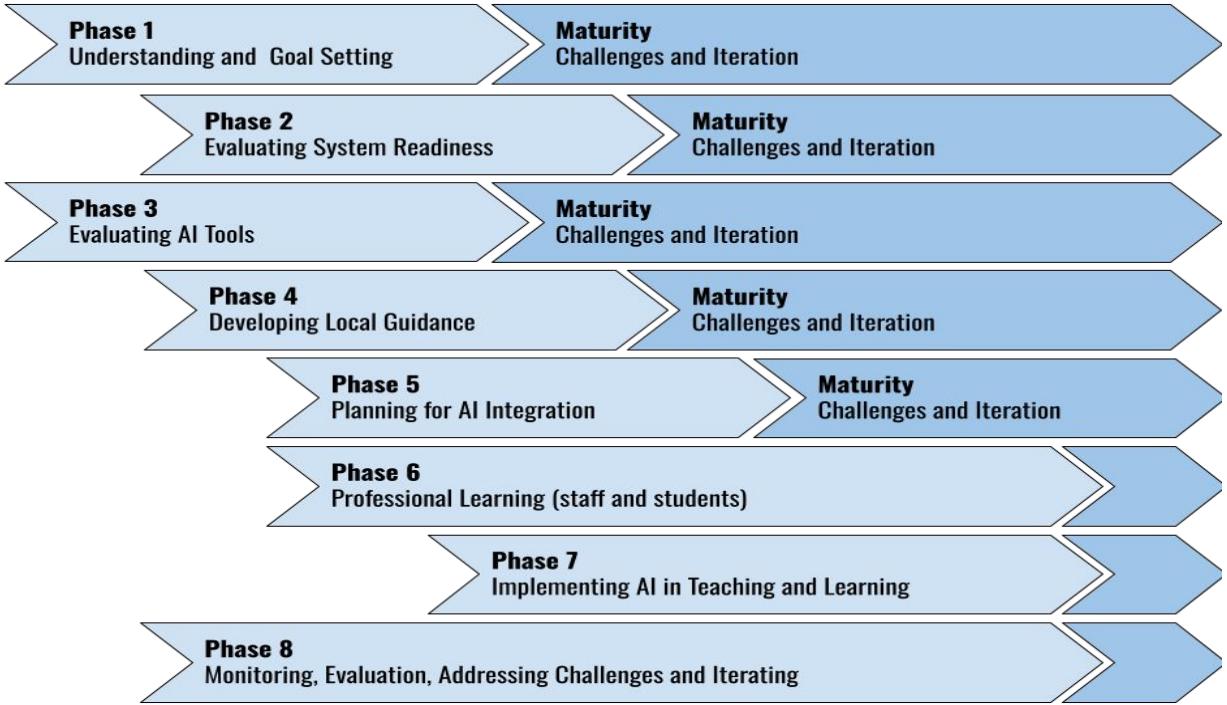
Purpose

This document is to help you use AI in your educational journey in a thoughtful, but secure manner, as you navigate learning, school, classes, and our AAPS-provided digital tools. Use the links below to help you figure out when it's okay to use AI on schoolwork, and to find out more about your rights and responsibilities using our district's tech tools.

Resources & Materials

Resource Link	Guidance
Understanding AI Text Generators	This "How-to" document from our AAPS Library Services Department can help you understand more about the use of AI Text Generators.
"Can I Use AI on this Assignment?" Scale	This document can help you understand when it might be acceptable, and when it isn't acceptable, to use AI on your schoolwork.

DRAFT: AI Planning Guidance Iteration



Closing Circle

3 THINGS: I found intriguing?

2 THINGS: I would like more info about?

1 THING: I still wonder about?