

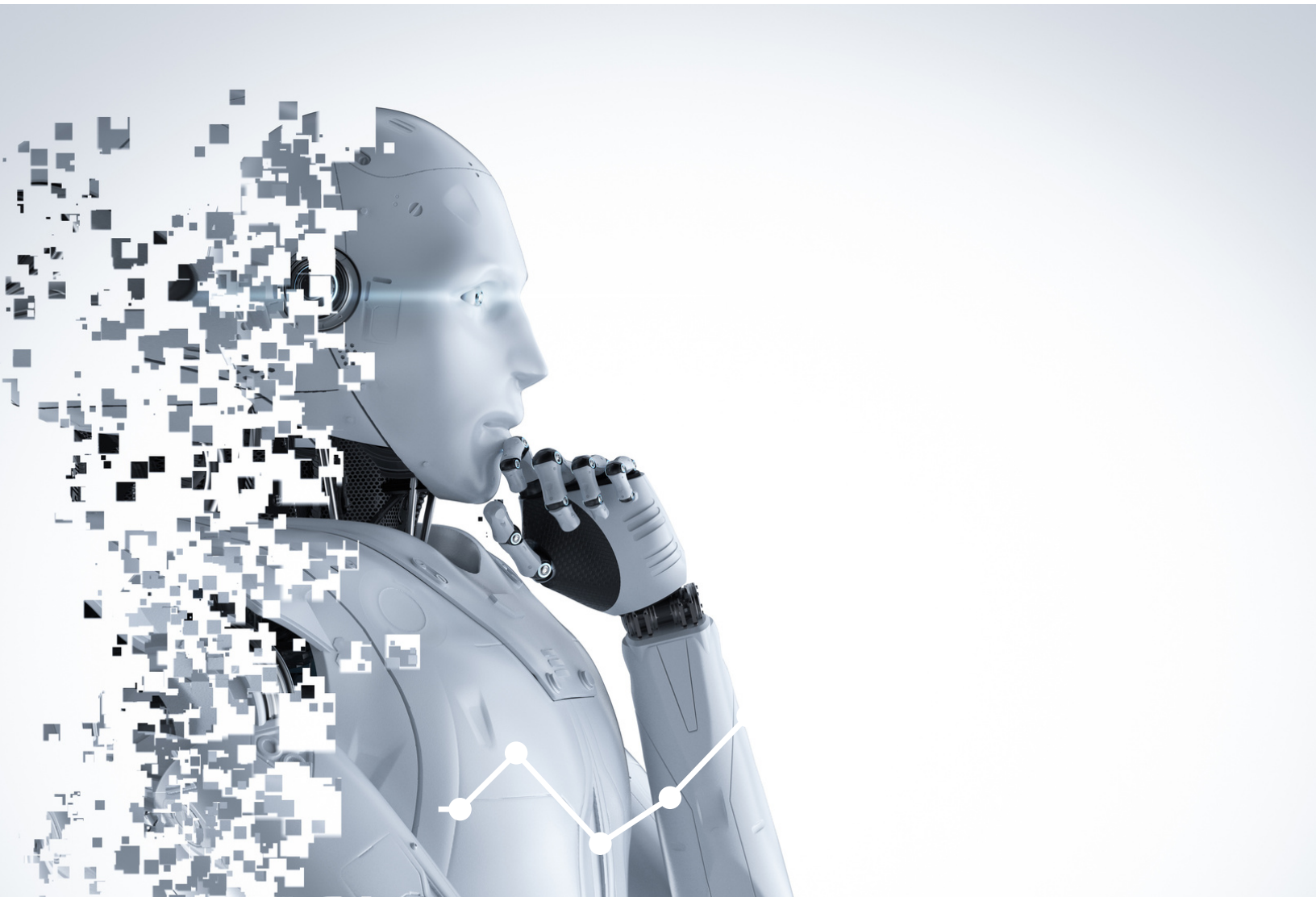
Artificial Intelligence (AI) in Independent Schools

A RESOURCE FOR SCHOOL LEADERS

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National Association
of Independent Schools



Association of Technology Leaders
in Independent Schools

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Message from NAIS and ATLIS

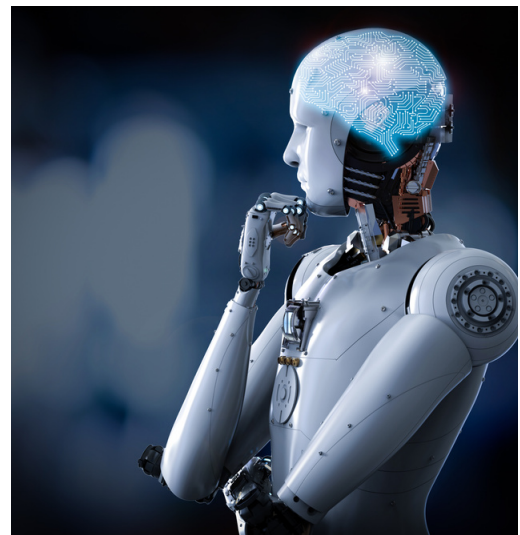
The field of artificial intelligence (AI) is more than 60 years old, but recent advancements in generative AI tools like ChatGPT, Dall-e, and others have created new challenges and opportunities for the education sector.

"Regardless of a school's decision about how to address recent advancements such as ChatGPT, the widespread integration of OpenAI's technology into other platforms means that all schools need to consider the pedagogical implications," said Christina Lewellen, ATLIS's executive director. "We're working together as a community to have tough conversations around bias, academic integrity, and the quickly evolving nature of this technology. This resource comes from that collective wisdom."

"Our current students will never live in a world where generative AI tools like ChatGPT are not available to them. In fact, during the next several months they are likely to be embedded into the tools we use every day. Creating resources for school leaders, including heads of school and technology directors, is crucial as we journey to build the schools our students need," said Tim Fish, chief innovation officer of NAIS.

Please note that this guide is intended to serve as a starting point for navigating this rapidly evolving technology. It is important to keep in mind that future iterations are likely to emerge, and this guide may not be comprehensive.

With AI as a powerful tool, education can be transformed into a dynamic and inclusive experience, fostering critical thinking and empowering students to reach their full potential.



Background

Most schools' mission statements indicate they need to prepare students for the future, often within some framework of character development. It is incumbent for schools to provide guidance for how and when to leverage artificial intelligence (AI) and AI tools in a positive manner for both our teaching, for student learning, and operationally in the same way that during the past 35 years we have developed plans for and incorporated calculators, the internet, spellcheck, web browsers, Wikipedia, laptops, iPads, remote learning, and other online tools.

AI and AI tools are going to rapidly develop, mature, and become more readily available to us in our general productivity applications. It is imperative for schools to research current and future developments, review and test these tools to understand both the promise, the limitations, and the risks of using these tools, and educate their communities on the ethical and innovative use of those resources.

Chatbots

Powerful artificial intelligence chatbots can write passable papers, believable scientific abstracts, and even fiction stories; they can generate a list of sources, solve complex math problems, create lyrics, and write lines of code. Most of what AI generates will be fairly unique and will not be detectable by plagiarism checkers. There are tools designed to identify the probability that text was generated by a language model, however, these are still hit or miss.

OpenAI (the builders of ChatGPT) warn that their new tool:

- May occasionally generate incorrect information
- May occasionally produce harmful instructions or biased content
- Has limited knowledge of the world and events after 2021

Note: As you are interacting with the chatbot, do not give it any personally identifiable information.

Example Chatbots

- [ChatGPT](#)
- [Bing by Microsoft](#)
- [Bard by Google](#)

NAIS and ATLIS are vendor neutral and do not give approval to any products or services. The purpose of mentioning a particular solution is solely to provide an example, and not as an endorsement.



AI FOR SCHOOL LEADERS

Legal and Risk Management Considerations

Legal and Risk Management Considerations for Bringing AI into the School and Classroom

If your school is considering bringing a powerful new tool such as AI technology into the school and classroom, here are some legal and risk management considerations to keep top of mind when devising or updating your plan and policies:



Terms of Service

The terms of service (sometimes also referred to as terms of use or terms and conditions) set out the perimeters for the use of a product. It is critical that schools carefully review the terms of service before introducing a new technology tool, particularly when the technology is emerging and constantly changing. Additionally, the terms themselves may change, so it is important to be aware of what the terms say about the company's ability to alter the conditions of use and how they will notify users of changes.

One important threshold question to consider is who can register an account and use a particular service or product. At present, ChatGPT requires that users be at least 13 years old and have parental or guardian permission if under 18 years old. Additionally, if a user is accessing the tool on behalf of another person or entity, they must have the authority to accept the terms on their behalf.

The terms may also cover other important elements such as scope of use (number of users, access to various product tiers, payment, how disputes must be resolved) as well as privacy/data security and intellectual property rights, both of which are explored more below.



Privacy and Data Security

Whether a school is considering bringing AI into the classroom or into school administration more generally, they should be cautious when sharing confidential, proprietary, or personal information with an AI tool.

Schools should review the tool's terms and associated privacy/security policies to understand how information that they feed into the tool—including any sensitive or personally identifiable information—is used and retained by the technology provider, as well as whether it is shared or sold to third parties.

Even in cases where the tool does not retain data inputted by a user, it may utilize the data to continue to teach and improve the tool itself.



Academic Integrity

As AI tools can generate responses that can mimic human speech patterns, it is important for schools to set policies proactively regarding appropriate use in the classroom versus what will be considered cheating or academic dishonesty.

For example, a school may decide that it is appropriate for students to use AI for initial research, brainstorming, outlining, or general preparatory work, but not for producing final written assignments.

School leaders should review the academic integrity sections of their student handbook and/or acceptable use policy to make sure that it is broad enough to cover emerging technologies like AI.

Leaders should also review their policies around exams, particularly if students can take exams at home or on-campus but with computer and internet access enabled, as AI tools are improving their ability to pass various standardized tests including the Law School Admissions Test (LSAT), the Graduate Record Examination (GRE), and Advanced Placement (AP) exams.



Information Accuracy

AI tools are only as accurate as the information sets upon which they are built. Depending on the data set in use, results may contain inaccuracies, be incomplete, or only include information up to a certain date.

The risks may be lower if AI is being used for an internal brainstorming document than if it is being utilized to draft an email to the school community explaining a recent emergency situation. In either case, it is incumbent upon users to verify the veracity of information in AI-generated work.



Mental Health

AI tools have varying levels of guardrails when it comes to the types of responses that chatbot technology may provide to sensitive questions.

Educators should be aware of this and understand how the particular tool they are considering bringing into the classroom handles queries relating to challenging topics such as anxiety, depression, suicide ideation, and identity.



AI Considerations for HR

There are various AI or other automated systems that employers can use to simplify the hiring process from creating job descriptions, evaluating application materials, messaging with potential candidates, and more.

Schools should be careful that they do not screen out persons with disabilities in violation of the Americans with Disabilities Act or discriminate based on other protected characteristics when using new technologies. In order to stay on the right side of the law, it's important for schools to understand the tools they are using including how they operate, interface with potential employees, and make decisions.

The Equal Opportunity Employment Commission (EEOC) announced in its draft Strategic Enforcement Plan for 2023-2027 that the use of AI systems in employment decision-making is a priority for the agency. Additionally, a few states and localities have passed laws on this issue and more are likely to do so in the future.

Resources

- [Key Steps to Protect Your Intellectual Property and Reduce Risk if Your Employees are Using Artificial Intelligence Chatbots](#)
- [Does Generative AI Need to Infringe Copyright to Create?](#)
- [Getty Images Sues Stability AI for Copyright Infringement](#)
- [Copyright Implications of Generative AI: Output Data](#)
- [Lensa: Are AI Art Generators Copyright Infringers?](#)
- [United States Copyright Office Letter](#)
- [Impressing a Robot: EEOC Takes a Byte Out of AI-Based Hiring](#)



Intellectual Property

Who owns the IP?

Technology often develops faster than the law, and the interplay between AI and IP is no different.

Schools should first look at the Terms to understand what ownership rights the technology provider claims and what rights (including ownership, assignment of rights, and licenses) are provided to the user. For example, according to ChatGPT's Terms: "ChatGPT retains the rights to the Services (application programming interface, software, tools, developer services, data, documentation, and website); the user retains the rights to the content that they input into ChatGPT; and ChatGPT assigns (i.e. gives over) the user the rights to the content that is produced by the tool (i.e the output)."

The rights given under a product's terms may be limited or unclear based on current law. Since this area of the law is developing by the day, users of generative AI should proceed cautiously when considering using the technology for outward-facing purposes.

Some potential issues include:

IP Infringement: Since many generative AI tools are trained using existing content, it is possible that the end product the tool creates could infringe on another creator's existing rights by utilizing prior works too extensively. It remains to be seen how doctrines like fair use will intersect with this new technology.

IP Protection (or Lack Thereof): When a person writes a book or paints a work of art, they can receive copyright protection and enforce those rights to prevent others from using their creation without permission. However, when AI is involved, there are questions about whether there was enough human involvement for the work to receive copyright protection.

In late 2022, an individual submitted a copyright registration application for a comic book. However, in February 2023, the Copyright Office denied registration to the images in a comic book because they were generated by AI while granting protection to text and the arrangement of the text and images.

The AI product at issue, in this case, allows users to input written prompts that generate 4 potential images. The resulting images can be updated through additional prompting.

The Copyright Office explained that the prompts serve more like suggestions and that the AI tool in question "generates images in an unpredictable way." Therefore, users do not exercise enough control over the final product and cannot be considered the author for purposes of copyright. This does not mean that AI-generated or assisted work could never receive copyright protection, but it will be fact specific and depend on the level of human control and interaction with the technology. The Copyright Office recently provided guidance on copyright registration and AI and launched a new artificial intelligence initiative to further explore this developing field.



AI FOR SCHOOL LEADERS

Questions for the School's Leadership Team

Questions for the School's Leadership Team

- Should policies for use of generative AI be universal or should they be set by division, department, at the course level, the teacher, or at the assignment level?
- Should there be a point person designated to review the new weekly changes in the AI environment, who can report to the admin team on the evolving landscape of AI?
- What should and shouldn't be acceptable to use as administrators, faculty, staff, and students at the:
 - Institutional level
 - Divisional level
 - Department level
 - Course level
 - Assignment level
- What is the process around (writing) assessments? Can they be redesigned to minimize the risk around the use of these tools? (drafts, personal reflection)

Next Steps

RESEARCH

Faculty, Staff, Administrators	Students	Parents
<ul style="list-style-type: none">• Create divisional research groups to test and share experiences, both positive and negative, to learn the potential and the issues with these tools.• Begin reviewing curricular and assessment practices toward a goal of developing opportunities to develop new assessment strategies and "AI-proofing" the learning.	<ul style="list-style-type: none">• Working under the guidance of teachers who will be doing the interactions with the current generative AI (ChatGPT), schools should work with students as partners to help define the positives and the negatives of these tools within the classroom.	<ul style="list-style-type: none">• Begin surveying parents in terms of awareness, education, and perspective so that we can understand how to communicate coming potential impact on academics, college applications, etc.

REVIEW

Faculty, Staff, Administrators

- Review applicable terms of service and privacy policies to ensure compliance of potential tools with federal and state laws, as well as school policy.
- Review and update handbook policies to explicitly define the school's policies about the use and application of these tools.
- What are the authoritative sources that will inform our decisions around new or altered policies?

Students

- How do students feel about these new AI tools? What, if any, issues do they perceive with the use of these new tools?
- Get with students to find out what tools they are using now, both for two-way education and to find out what tools they want to know.
- Safe space question – If they have used these tools prior to now, how and why did they use them? Did they learn anything from that experience?

Parents

EDUCATE

- Provide PD opportunities, either within divisional or departmental meetings or via an asynchronous course to learn about AI and AI tools.
- Introduce faculty to what AI is, how it works, and give them an overview of ethics and bias.

- Continue to develop activities and units for PreK – 6th-grade students to learn about topics of algorithmic literacy in their regularly scheduled technology courses.
- Identify and plan for opportunities to work with all students in grades 7th – 12th-grade to learn about topics of algorithmic literacy and the application of AI and AI tools (as they become available) in courses and other settings.
- Continue to develop specialized study within the 7th – 12th-grade technology elective course to provide opportunities for students to learn more about AI.

- Provide background on algorithmic literacy.
- Introduce families to what AI is, how it works, and give them an overview of ethics and bias.
- Provide a framework for engaging in family conversations about the use and expectations for responsible use of generative AI.

Academic Integrity Policy

Consider adopting a policy that allows the judicious use of AI in the learning journey. Schools can ensure that students have access to cutting-edge tools and methods while upholding academic integrity and promoting fairness.

Sample language:

- AI tools may be used to aid in research, analysis, and comprehension of course materials. However, the use of AI tools must be disclosed and properly cited in all academic work.
- Institutions should provide guidance and support for students who wish to use AI tools in their coursework. This may include training on responsible use, as well as resources for evaluating the reliability and validity of AI-generated results.



Allegations of Academic Dishonesty: Questions to Be Answered

A school's policy should include the following questions in the case of allegations of potential academic dishonesty in conjunction with their academic dishonesty policy:

- Which AI tool or tools were used? How did you use the tool? Was it for a legitimate learning purpose? Was the use of the tool allowed for the assignment? Were the results for the tool properly cited/credited in the submitted work?
- Was the use of these tools intended to circumvent or outsource the learning? If there was intentionality and predetermined purpose, it should be dealt with appropriately.
- Should the student be allowed to make up the work?

Academic integrity isn't a one-size-fits all policy

- Schools should adopt the policy that is right for them
- Institutions should regularly review policies



AI FOR SCHOOL LEADERS

Guidance for Faculty

Special note: This section uses ChatGPT as an example of a chatbot. This is not an endorsement of ChatGPT, only an illustration of a chatbot. At the time of publication, ChatGPT was one of the only services that allowed students ages 13+ to use the platform with parental consent.

How Faculty and Administrators Can Get Started with AI

Tip: Before incorporating AI into the classroom, try it out yourself. The following pages have tips on how you can use AI to decrease your workload.



It's often easier to craft an email by modifying some text instead of staring at a blank screen. Chatbots can be your personal editor and your students' personal tutor.

AI is a great generative brainstorming tool. Whether you are planning a unit lesson or crafting an email reminder for a field trip, chatbots can give you new ideas on how to communicate and save you time.

The magic of chatbots comes from repeated interactions with the tool. It remembers your history and will make modifications accordingly. After it generates content, try revising it with the AI. Tell the chatbot to rewrite for clarity, adjust the tone, change to a third person, summarize text, or create bullet points, outlines, tables, or even content for a slide deck. Then go back and edit the output with your own voice.

Be curious and get to know the technology yourself. Your students will also be eager to show you and their fellow classmates new and inventive ways to interact with AI tools.

Prompt Engineering

'Prompt engineering' is the term for writing queries in AI. Try pasting emails or drafts of text in the AI along with the sample prompts below. Collaborate with the AI to utilize its capabilities as your personal copyeditor, and continue working together to make revisions until you attain the desired outcome. Here are some general tips:



Context

When appropriate, specify the target audience such as parents, families, students, board members, or teacher colleagues in your prompt.



Define tone

Provide instructions to the AI to modify the tone of communication to sound either professional or friendly. For instance, modify emails to eliminate any passive-aggressive language, or request the AI to rephrase the content to convey a more assertive tone.



Include grade level

Inform the AI about the intended grade level for the educational material. A useful tip is to copy and paste the text into ChatGPT and request it to provide the same information but in language suitable for a different grade level.

Additional instructions to include in your prompts:

- Reword for clarity
- Make more concise
- Instead of using paragraphs, present key points in bullet points.
- Revise the format of my email to enhance the visual appeal and readability.

Guidance for faculty

When leveraged properly, AI is a tool that can unlock creativity while promoting deep thinking and problem solving.

Featured Resource: Include digital citizenship teaching moments and lessons as part of the inclusion of AI tools in your class.

[Common Sense Media's Lesson: 'Artificial Intelligence: Is It Plagiarism?'](#)

[The SIFT: Dig Deeper: AI misinformation](#)

Be aware of the limitations of ChatGPT

- Whatever the generative text is, it should be used as a first step
- The validity of the information provided by the chatbot has not been verified and requires confirmation from a dependable source.
- The chatbot has been programmed to sound self-assured while answering questions, making it difficult to determine its responses' accuracy based on the conversation's context.
- At the release date of this report, ChatGPT's knowledge is limited to events prior to 2021, and does not have access to the internet.
- The platform is currently in BETA and available for free, but it's uncertain how long it will remain so. Therefore, it's advisable not to rely solely on this tool for planning lessons and units. When the platform reaches its capacity, new connections will be unavailable.



Prompts for Faculty to Try

Give directions

Prompt: "Tell a 4th grader how to submit an assignment in Google Classroom. Use Emojis."

Great! To submit an assignment in Google Classroom, follow these steps:

1. 🖥️ Open your computer and go to classroom.google.com
2. 📧 Log in with your school email and password
3. 📎 Find the assignment that you need to submit
4. 📎 Attach any files or documents that you want to turn in
5. 📝 Type any additional information or responses that your teacher has asked for
6. 📤 Click the "Turn In" button to submit your assignment
7. 🎉 You're all done! Good job on submitting your assignment.

Remember, it's always a good idea to double check that you have attached all the correct files and typed everything you need to before you turn in your assignment. This will help make sure you get full credit for your hard work!

Write a difficult email

Prompt: "Write a difficult email to a parent from their teacher. The topic of the email is that their child is struggling in school" (Reminder: do not include personally identifying information!)

Subject: Concerns Regarding Your Child's Academic Progress

Dear [Parent/Guardian],

I hope this email finds you well. I am writing to express my concerns about your child's academic progress in my class. It is my duty as your child's teacher to inform you of any challenges they may be facing in their studies, and unfortunately, I have noticed that your child has been struggling lately.

As you know, we are midway through the academic year, and the pace of the curriculum is becoming more challenging. Your child has been having difficulty keeping up with the coursework, and their grades have been consistently lower than what is expected of them. I have tried my best to support and guide them, but it seems that additional help is required to get them back on track.

I strongly believe that every child has the potential to succeed academically, and I am committed to helping your child reach their full potential. However, I cannot do it alone. I am requesting that we work together to support your child's academic progress. I

Generate report card comments

Prompt: generate words of encouragement for report card comments

1. "You have shown significant progress and improvement this term. Keep up the good work!"
2. "I am proud of your hard work and dedication towards your studies. Keep striving for excellence!"
3. "You have demonstrated great commitment to your studies, and your efforts are truly paying off. Keep it up!"
4. "I can see that you are putting in a lot of effort to improve your grades, and I am impressed. Keep pushing yourself!"
5. "Your perseverance and determination have not gone unnoticed. Keep working hard, and you will achieve great things!"
6. "You are capable of achieving great success, and I believe in you. Keep up the fantastic work!"
7. "You have a great attitude towards your studies, and I appreciate your willingness to learn. Keep up the positive mindset!"
8. "I am confident that with your hard work and dedication, you will continue to excel in your studies. Keep striving for greatness!"
9. "Your progress this term has been impressive, and I encourage you to continue to

Write lesson plans

Prompt: Write a lesson plan for <grade> on <topic>

Introduction (5 minutes):

The teacher will begin by asking students if they have ever seen an old penny that has turned brown or green. The teacher will explain that this is an example of a process called "oxidation" that happens when certain metals are exposed to air and water.

Direct Instruction (10 minutes):

The teacher will provide a brief explanation of oxidation, using simple language and examples that are relevant to third-grade students. The teacher will explain that oxidation happens when certain materials react with oxygen in the air, and that this can cause the materials to change color or texture.

Guided Practice (10-15 minutes):

The teacher will use visual aids to show examples of oxidation, such as pictures of rusted metal or browned apples. Students will be given a handout that includes pictures of common items that can undergo oxidation, such as pennies and iron nails, and asked to identify which items are oxidized.

Independent Practice (5-10 minutes):

Students will be asked to draw a picture of an item that can undergo oxidation and label it with the word "oxidation". They can then share their pictures with the class and explain what they have learned about the process of oxidation.

Conclusion (5 minutes):

Prompts for Faculty to Try

Create learning objectives

Prompt: write learning objectives for a <grade level> on <class subject>



Learning objectives for a high school class on new media:

1. Identify and describe different forms of new media, including social media platforms, mobile applications, and digital content creation tools.
2. Analyze the impact of new media on society and culture, including how it affects communication, entertainment, and commerce.
3. Develop proficiency in using various new media tools and platforms to create, edit, and share digital content.
4. Understand and apply the principles of digital citizenship, including online safety, privacy, and responsible use of technology.
5. Evaluate and critique the credibility and accuracy of information found on various new media platforms.
6. Explore the ethical and legal implications of new media, including intellectual property rights, online harassment, and cyberbullying.
7. Demonstrate effective communication and collaboration skills through digital media, including group projects, multimedia presentations, and online discussions.
8. Develop critical thinking skills by analyzing and interpreting media messages and understanding how they shape opinions and attitudes.

Create a class syllabus

Prompt: design a syllabus for a <grade> <class subject>

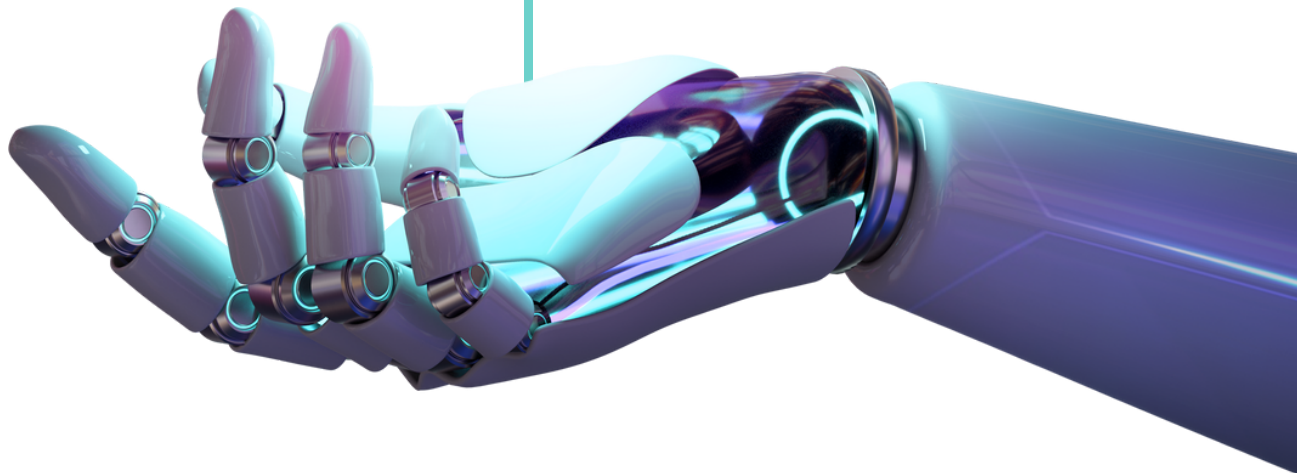


Course Title: Algebra 1

Course Description: This course is designed to introduce students to algebraic concepts and skills needed for higher-level mathematics courses. Students will learn to solve equations, graph functions, and analyze data using algebraic methods.

Course Goals: By the end of this course, students will be able to:

1. Solve linear equations and inequalities using a variety of methods.
2. Graph linear functions and interpret the slope and intercepts.
3. Solve systems of linear equations and inequalities using a variety of methods.
4. Simplify and evaluate algebraic expressions.
5. Factor and solve quadratic equations.
6. Solve exponential and logarithmic equations.
7. Analyze and interpret data using scatter plots and lines of best fit.
8. Apply algebraic concepts to real-world problems and situations.
9. Use technology, such as graphing calculators and computer software, to solve



Prompts for Faculty to Try

Teaching and learning prompts for ChatGPT

- Write lyrics in the style of [artist/genre] that educates students on [topic].
- Create a list of discussion questions to facilitate conversation on [topic].
- Explain the process of [task, concept] at a [grade] level.
- Develop a project-based learning activity that engages students in exploring [topic] in a meaningful way.
- Develop a case study that challenges students to apply their knowledge of [topic] to a real-world scenario.
- Write a short story or play that incorporates themes related to [topic] and can be performed in the classroom for [grade].
- Generate a set of flashcards or study materials that help students memorize key terms or concepts related to [topic].
- Develop a graphic organizer or mind map that helps students organize and visualize their understanding of [topic].
- Produce an exemplary essay on [topic], incorporating [features].
- Construct a group project that requires students to apply their understanding of [concept/topic] to a real-world scenario.
- Brainstorm a list of real-world examples that illustrate [concept/topic] and challenge students to come up with their own examples.

Prompts for Faculty to Try

Try brainstorming with ChatGPT

- What are some effective strategies for teaching a particular topic or concept to students with different learning styles?
- How can technology be integrated into the classroom to enhance student engagement and improve learning outcomes?
- What are the most effective ways to assess student understanding and progress throughout a unit or lesson?
- How can a teacher differentiate instruction to meet the needs of diverse learners within a classroom setting?
- What are some current trends and best practices in teaching a <specific subject area> or <grade level>?
- What are some effective strategies for promoting student creativity and innovation in the classroom?
- How can teachers effectively use data to inform their instruction and improve student learning outcomes?
- What are some effective strategies for building positive relationships with students and fostering a positive classroom culture?
- What are some effective strategies for promoting critical thinking and problem-solving skills among students?



AI FOR SCHOOL LEADERS

Ethics and Bias

Ethics and Bias



Before new AI is introduced, consider critical thinking steps to go through similar to what schools may do when evaluating a new tech tool.

To realize the full potential of AI, we need to ensure its safety, security, and ethical considerations. We must address the potential bias and ensure that everyone, regardless of ethnicity, gender, and culture, benefits from AI.

Fei-Fei Li, Co-Director of Stanford University's Human-Centered AI Institute

Considerations for ethics and bias in AI are complex but could include topics such as:

- Humanity/human skills in the world of AI
- Biases in algorithms and how the AI was trained
- Data privacy, data ownership, and transparency
- Responsible use when creating AI content

Resources:

- [Ethical guidelines on the use of AI and data in teaching and learning for educators](#) (European Commission)
- [An Ethics of AI Curriculum for Middle School Students](#) (MIT Resource)
- [The truth about algorithms short video](#) (by Cathy O'Neal)
- [Teaching AI Ethics to high school students](#) (AI Club)
- [AI Open Learning Curriculum for High School students](#) (AI for All)
- [The Ethical Framework for AI in Education](#) (The Institute for Ethical AI in Education)

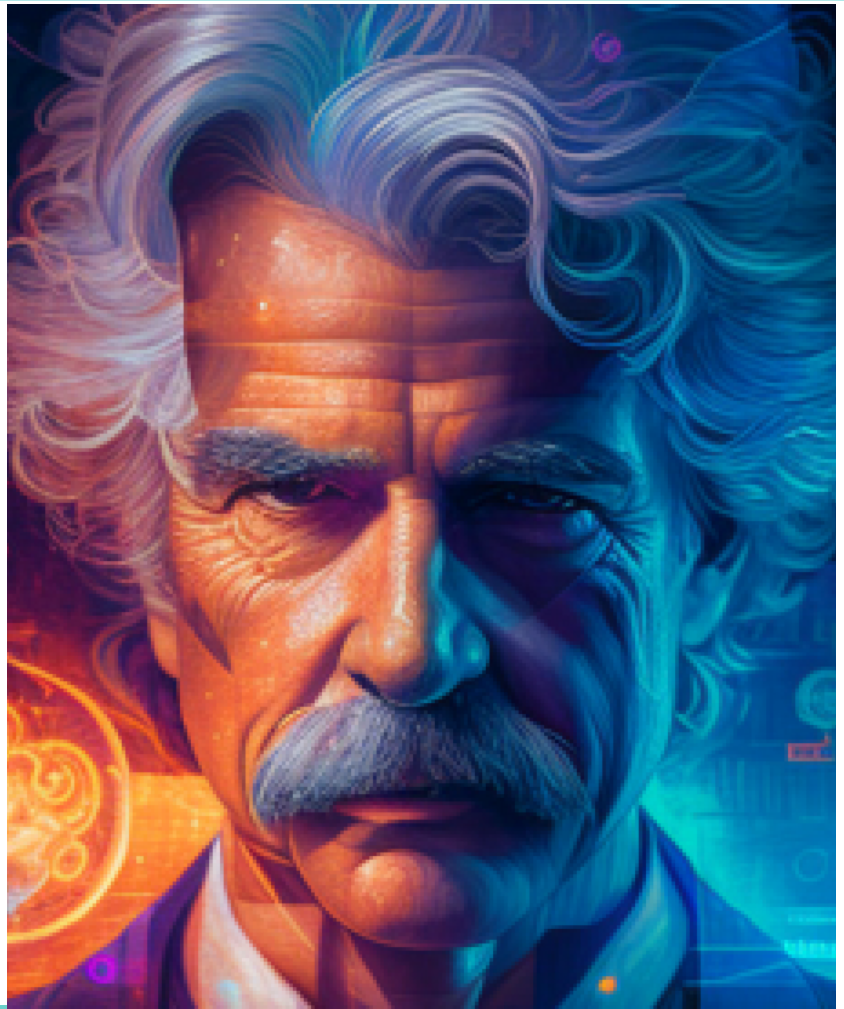


AI FOR SCHOOL LEADERS

Using AI in the Classroom

“I didn't have time to write a short letter, so I wrote a long one instead.”

— Mark Twain



AI-generated art using "Midjourney"

A Shift in Productivity and Creativity

Mark Twain's humorous sentiment holds true today. It takes more effort to be concise and eloquent. There is an art to revision and editing. In today's world, skills related to revision and editing are extremely crucial. However, with the advancements in AI technology, people can now use these tools to assist them in the revision process, and even collaborate with AI for better results.

AI can even shorten your letter for you.

The Impact of AI on the Classroom

Prompt engineering: a new digital literacy skill

Prompt engineering is a new digital literacy skill that enables students to communicate with technology by designing prompts that elicit desired responses from AI. Prompt engineering enables students to gain a deep understanding of how technology responds to their input, unlocking exciting opportunities for creativity, innovation, and personal growth in digital environments.

Chatlogs as a new learning artifact

The transparent and documented use of AI can build a culture of trust. If students are allowed to use AI for an assignment, consider having them turn in their chatlog with the AI as an artifact of learning. The goal is to have them collaborate with the AI while still maintaining their unique voice and perspective. Consider having students turn on track changes to document their writing process and focus more on the process.

Sample Rubric for AI assignments

Sample rubrics: generic

Level	Description
<i>Outstanding</i>	Advances the field. Mastery of critical reflection on AI generated content; demonstrates the ability to abstract from the material, establish non-obvious relationships, and productively extend the source material; strong evidence of original thinking and deep understanding. May serve as a model on how to surpass AI generated content.
<i>Excellent</i>	Accomplished. Insightful critical reflection on AI generated content; convincing improvements that include non-trivial connections; some original thinking; clear evidence that the level of understanding surpasses that of the synthesized contributions. In total, a significant improvement over AI synthesized content.
<i>Good</i>	Competent. Critical reflection on AI generated content; generally successful attempts to improve on it; evidence that the material has basically been understood. Important further improvements beyond the quality of AI generated content could be made.
<i>Adequate</i>	Significant gaps. Use of AI generated content needs more critical reflection; attempts to improve need to be more convincing; not all material appears to have been understood. There is obvious and significant scope to further improve beyond the quality of AI generated content.
<i>Marginal</i>	Large gaps. Unreflected use of AI generated content; attempts to improve on it are inconsistent and not always coherent; lack of evidence that the material is understood. Barely surpasses the quality of AI generated content.
<i>Inadequate</i>	Shows no significant improvements over AI generated content.

AI Rubric produced by the [Sentient Syllabus](#) is licensed under the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](#).

'Hands-On AI Projects for the Classroom' Guides

from International Society of Technology Educators (ISTE) and General Motors



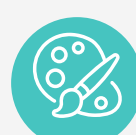
**Elementary
School**



**Secondary
School**



**Computer
Science**



Electives



AI Ethics

Rethinking Assignments

When designing an assignment or lesson, consider the desired outcome first. How will you evaluate whether a student has successfully attained the intended learning objectives? What are the various methods by which they can showcase their understanding?



Emphasizing creativity and critical thinking: AI can be very good at tasks that involve routine or predictable patterns. Therefore, it may be more beneficial for teachers to assign tasks that require creativity, critical thinking, and problem-solving skills. This can help students develop skills that are less likely to be automated in the future.

Incorporating AI tools in the assignment: Teachers can also consider incorporating AI tools into the assignment to help students analyze data, generate insights, or automate repetitive tasks. For example, students can use machine learning algorithms to analyze data sets or use natural language processing tools to automate proofreading and editing.

Focusing on ethical considerations: AI raises important ethical considerations that teachers can incorporate into the assignments. Teachers can ask students to explore the ethical implications of AI, such as bias and privacy concerns.

Teaching students about AI: As AI is becoming increasingly ubiquitous, it's essential to teach students about its potential applications, limitations, and impact on society. Teachers can assign projects that require students to research and analyze AI-related topics, such as deep learning, robotics, and natural language processing.

Additional AI Resources



[MIT's Day of AI](#)



[ISTE's AI course](#)



[Sentient Syllabus](#)



[International Baccalaureate AI guidelines](#)



[Teaching AI: Exploring New Frontiers for Learning](#)

Pedagogical Strategies Modified with AI

STRATEGY	EXAMPLES INCORPORATING AI
Think-Pair-Share	Students reflect on a prompt, discuss with a partner, conduct research with ChatGPT, discuss findings with their partner, and present conclusions to the class.
Jigsaw Method	Students research and become experts on a topic, then teach it to their peers with support from ChatGPT.
Socratic Method	Students engage in a dialogue with ChatGPT, asking and answering questions to deepen their understanding of a topic.
Gamification	Students learn through games or simulations, with ChatGPT serving as a virtual game master or providing feedback on their performance.
Reflective Practice	Students reflect on their learning and experiences, with ChatGPT providing prompts or questions to guide their reflections.
Concept Mapping	Students visually represent their understanding of a topic, with ChatGPT suggesting additional connections or concepts.

MLA style guidance for citing generative AI

[Read the full MLA citation guide online.](#)

MLA guidelines state:

- cite a generative AI tool whenever you paraphrase, quote, or incorporate into your own work any content (whether text, image, data, or other) that was created by it
- acknowledge all functional uses of the tool (like editing your prose or translating words) in a note, your text, or another suitable location
- take care to vet the secondary sources it cites

Using the MLA template

Author

MLA does not recommend treating the AI tool as an author.

Title of Source

Describe what was generated by the AI tool.

Title of Container

Use the Title of Container element to name the AI tool (e.g., ChatGPT).

Version

Name the version of the AI tool as specifically as possible. Example: ChatGPT 3.5

Publisher

Name the company that made the tool.

Date

Give the date the content was generated.

Location

Give the general URL for the tool.

Prompts to Try in the Classroom

Demonstrate with whole group or get parental consent for students to use ChatGPT

- Act like an expert in [topic].
- Present information about [topic] in [a table, bullet points].
- Rewrite at [grade] reading level [paste text].
- Create a [story, poem, song, play] about [topic].
- Create a list of [topic].
- Give me step-by-step instructions for [topic].
- Teach me [topic] in the form of [musical genre].
- Create an outline for [book, paper, slides] on [topic].
- Create a [presentation, flashcard, outline, mindmap] on [topic].
- Rewrite [paste text] for [clarity, to be more concise, professional tone].
- Can you help me brainstorm ideas for [a research project/a creative writing assignment/an oral presentation] and provide feedback on my progress?

Prompts can get very detailed. Here is an example from <https://prompts.chat/>

- I want you to act like {character} from {series}. I want you to respond and answer like {character} using the tone, manner, and vocabulary {character} would use. Do not write any explanations. Only answer like {character}. You must know all of the knowledge of {character}. My first sentence is "Hi {character}."

Ways Students Can Use AI

Chatbots can be a valuable thinking partner for students because it can engage them in dialogue, provide feedback, challenge their thinking, and offer resources and support to help them succeed.

Collaborator

Brainstorming: Students can interact with ChatGPT as a starting point to learn more about a topic. It's often easier to begin by editing instead looking at a blank screen.

Feedback: ChatGPT suggests ways to improve arguments, structural organization, and ideas as well as

Encouraging reflection: ChatGPT helps students develop metacognitive skills by prompting them to reflect on their thinking and learning processes.

Alternative perspectives: ChatGPT challenges assumptions and biases by offering alternative viewpoints and developing critical thinking skills.

Providing resources: ChatGPT provides relevant resources and information to help students expand their knowledge and research skills.

Peer editor

The iterative process of using AI as a copy editor involves several steps such as:

- Use as a sounding board for new vocabulary
- Ask the chatbot what information could strengthen the argument
- Have the AI improve the organization of content
- Add student voice back in and verify all sources

Try chatbots as a "thinking partner" or personal tutor

Prompts to Try in the Classroom

Edit this essay

Prompt: Edit this essay <paste text> at a <grade/reading level>

Additional ideas: for clarity, rewrite in third person



Edit this essay: What is Electricity?

We use electricity everyday of our lives for home , school, and work. But where does electricity come from what is it made of? As we all no that matter is all made up of atoms and its all made of three parts the proton, the neutron and the electron. The articles say how electrons flow through the current. One says what's makes up the neutrons to make the energy flow "making up an atom-proton,the neutron and protons." The electron flows through technology and the last one says how conductors help move electrical currents through material and use it for power. "ammonia and vinegar conducts electricity very well." That's what makes electricity so cool!



Electricity is an essential part of our daily lives, powering our homes, schools, and workplaces. However, have you ever wondered what electricity is made of and where it comes from? As we know, matter is made up of atoms, which consist of three parts: protons, neutrons, and electrons.

Several articles explain how electrons move through electrical current, and how the neutrons make up the energy flow. These particles are crucial to the movement of

Suggest more ideas related to the topic

Prompt: Suggest more ideas related to <"paste text">



Here are some additional topics that can be added to the essay:



- The benefits of participating in sports for academic performance: Research shows that student-athletes tend to have better academic performance than non-athletes. This could be due to various factors, such as improved time management skills, discipline, and a sense of accountability. The essay can explore these benefits and how they relate to the grades-before-play policy.
- The role of coaches and parents in supporting student-athletes: Coaches and parents play a crucial role in motivating and supporting student-athletes to excel both in sports and academics. The essay can discuss how coaches and parents can work together to

Dive deeper with specific examples

Prompt: Give three examples of each in short form (Note: this is a continuation of the prompt above)



Sure! Here are three examples for each of the suggested additional topics:

1. The benefits of participating in sports for academic performance:

- Student-athletes tend to have higher GPAs and graduation rates than non-athletes.
- Participating in sports can improve cognitive skills such as memory, attention, and processing speed, which can translate to better academic performance.
- Regular physical activity has been linked to reduced stress, anxiety, and depression, which can have a positive impact on academic performance.

Provide feedback on my work

Prompt: Provide feedback on <paste text>.



As an AI language model, I can't provide subjective feedback on writing, but I can offer some general observations and suggestions for improvement.

Your essay discusses the importance of prioritizing academics over sports for high school student-athletes. While the argument is valid, it would be helpful to provide some concrete examples or statistics to support your claims. For instance, you could include data on how many student-athletes are suspended for poor academic performance, or how many college scholarships are lost due to low GPA. This would make your essay more persuasive and impactful.

Additionally, it would be helpful to address potential counterarguments and rebut them. For example, some people may argue that sports can actually enhance academic performance by providing a sense of discipline and motivation. By acknowledging and addressing these counterarguments, you can make your essay more well-rounded and thoughtful.

Finally, it would be useful to expand on some of the topics you touch upon briefly, such as the benefits of sports for academic performance, the role of coaches and parents in supporting student-athletes, and the impact of COVID-19 on student-athletes. Providing more depth and detail on these topics would make your essay more comprehensive and informative.

Copyedit a small portion of text

Prompt: Rewrite for (clarity, conciseness, tone, style) <"paste text">.



Reword for clarity: "An athlete should want to be known as an "all around" student-athlete, not jus an athlete. An all around athlete is someone who can get it done for his coach in their sport, plus get it done in the classroom for both their teacher and coach. If they screw up on grades, they are not only letting their coaching staff down but their also letting down their fellow teammates. Nothing would hurt fans, teammates and coaches more then a star player not being able to participate in an event for because of their academics in school. Who knows? Maybe the whole community will be let down not seeing u participate at an athletic sporting event."



It is important for student-athletes to strive to be well-rounded individuals who excel not only in sports but also in academics. Being an all-around athlete means being able to perform for both coaches in the sporting arena and teachers in the classroom. If a student-athlete fails to prioritize their grades, they not only disappoint their coaching staff but also their teammates. A star player being unable to compete in a sporting event due to poor academic performance can be a huge letdown for fans, teammates, and coaches. Ultimately, failing to meet academic expectations can have a negative impact on the entire community's morale.



Educational Leadership in the Age of AI

A daylong summit to address
challenges and explore opportunities
with artificial intelligence
in independent schools

Wednesday, May 3
Grand Rapids, Michigan

Learn more and register:
theATLIS.org/ai-summit



New View EDU Season 4 Premiere: AI and the Future of Education

Christina Lewellen, of ATLIS, and Paul Turnbull, head of Mid-Pacific Institute, join host Tim Fish for a discussion about the rapid evolution of artificial Intelligence and the impact ChatGPT will have on the future of schools.

▶ **LISTEN AND SUBSCRIBE NOW**



ACKNOWLEDGEMENTS

Without their dedication and commitment, this project would not have been possible. Each of the volunteers provided invaluable insights, feedback, and contributions that greatly enhanced the quality and usefulness of this guide.

- ATLIS AI Task Force
- NAIS Legal Team

We would like to express our sincere gratitude to the many volunteers who generously contributed their time and expertise to make this guide on the topic of AI possible.

Contact

National Association of Independent Schools
11129 20th Street NW, Suite 800
Washington, DC 20036

NAIS.org
membership@nais.org
(202) 973-9700

Association of Technology Leaders in Independent Schools
14 Weems Lane #257
Winchester, VA 22601

theATLIS.org
membership@theATLIS.org
888-50-ATLIS

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