WRNN CRAFT Workshop 1: Using AI for STEM — Shared Group Workspace

This is our LIVE collaborative document. **Everyone** types here — find your group's colored section and contribute. We'll use this to share findings across groups in real time.

> ✏️ *HOW THIS DOC WORKS: Scroll to your group's color-coded section. Type directly. Everyone can see your work. Add rows to shared tables as needed.* ***Don't delete other groups' content!***

🔍 Contextualize: AI In Your World

Where have you (or your students) encountered AI in a STEM context? Just type below — no need for sentences.

Name OR Subject+Level+State+Your Initials (e.g., Math+HS+FL+MB)	Few words/phrase about where you've encountered AI
1. Petrna Miller-general ed-kinder-California	I have used AI very sparingly over the years, but as I entered grad school, I have found it to be very helpful in brainstorming and helping to create charts and infographics to help solidify my thinking. I have generally encountered AI everywhere! From copilot in Google, to Alexa on Amazon. It is here and needs to be used as the supporting tool that it is. I also have found many mistakes in some of the responses, so it should always be used with caution.
2.Amanda del Rio Suarez - HS Physics - TX	I used ChatGpt premium to teach myself things that I'm not 100% sure on, or if I get really great questions in class that I don't have the answers to. I used CK-12 as a classroom resource for students to use as a textbook & they have built in AI model chatbot called flexi for students to ask questions to, along with a teacher ai that produces quizzes, reading and writing prompts, practice problems, etc.
3. Kylee Robinson	I tend to only use AI as a time-saver or turning lengthy tasks into quick ones (test/quiz creation). I would like a way to better incorporate TEKS into my use of AI. Students constantly use AI to generate research papers/FRQs/etc (badly).

4. Caitlyn Bridge - Biology, pre-service, CO	I am currently a graduate teaching assistant and I have encountered AI for when students use it to complete assignments. I have personally used it to help brainstorm ideas for lessons or new ways to approach topics to better my lessons.
5.Cinthia Mendoza- HS- TX	The way that I used AI is that I have used AI on wayground to generate questions for powerpoints, generating worksheet ideas aligned to the standard, try to generate infographics or generate easy to understand photos for students. I also use it to generate ideas for activities and labs.
6. Dylan Walling - Bio - 10-12 - OR	I have encountered AI in many different parts of education. I'd say primarily it has been used as a tool for students to easily complete assignments. I also have used it myself to help make my lessons more engaging, to bring down the reading levels of texts, to help brainstorm for lessons, or to also help in the rewriting assignments to make them more clear.
7. Nicole Burye - 8th Grade Science - CA	I have used AI as a pre-service teacher to create graphs or diagrams for labs. I have also used it to check that lesson plans align with NGSS. My students have used the cK-12 AI Flexi to help them answer questions in class they're confused about or clarify definitions for difficult vocabulary.
8.Catherine Hooker (CA)-High School Physics	-To generate challenge/beyond proficiency problems for a calculations test -To generate a list of transfer tasks for units
9. Liz Gilroy, 3rd, Gen Ed, NM	I have used AI in my lesson planning, creating lessons, but can't think of examples where I or my 3rd graders have encountered it in STEM so far.
10.Elizabeth Hargrove, 6-8 Preservice Math, CO	I have used AI as a student to help me generate practice problems, study guides and overall as a study tool for me to practice and learn content. I have used it in making practice problems and adding content to my tutoring lessons when they are short on content for the day. I have seen students use AI while I was subbing to solve the problems for them and then copy the answers to the online platform.
11. Desteny Becerra - 7th, Pre-service, CA	In my third year of college, when I took a scientific writing class, they really pushed us to use AI to ask questions about anything we have while reading scientific articles. I have then used AI to help me decipher any articles that I have trouble understanding or need better clarification on. As

	for my students, I really try to limit them from using AI in the classroom, since they become too dependent.
12. Megan Smith 1st grade	I have not used AI for my classroom. I have only used AI for Professional letters as a parent/coach.
13.Isabel Lopez	I have used AI to create quick warm ups and exits tickets for my 8th grade science class
14.Science-MS-IA-CS	Students have used AI, I believe, to generate science fair project ideas. Also anytime they “google” something, they are most likely to read the AI snippet and go from there in my experience.
15.Brandi Bass	My students really only know AI from silly things on Youtube, but they have not really used it for educational topics. I use it daily from writing professional emails, answers to topics, creating assessments,etc.
16.Amy DeGroat	I have used it to make to increase DOK questions for math on the same standard.
17.Kyla Baker	I use AI to help create differentiated lesson/activities for review. I Love using Diffit to make reading stations for my kids. Gemini, Drift, ck12 are my go to. I also try to teach my kids how to use AI ethically.
18. Naline Beshay	Seen it used as a search engine, to cheat on assignments, autograde free response problems, come up with similar question types, etc.
19.Julian Beard	I have used AI personally to help me code a seating chart randomizer and group maker. It helps with creating different test versions and other tedious word doc editing tasks.
20.Collin Clark	I have never used AI for work related matters.

🔄 Reframe: “AI as Co-Pilot, Not Autopilot”

After the reframe discussion, each group captures their key takeaway and one concern that surfaced.

Group	Key Takeaway from Discussion	Biggest Concern That Surfaced	How We’d Address That Concern
Group 1 - Math	AI can be a really useful tool but students and educators don’t really know how to use it properly. Like how do we teach a 2nd grader to use it and not just have them copy and paste everything for the future. AI is being used in classrooms but it’s not being used in the best way, teachers aren’t being taught how to incorporate it in ways that benefit student learning. We see students using AI to takeaway student thinking, such as just plugging screenshots into chatgpt and asking for it solve for them and not trying and having that productive struggle	- Teaching ethical uses of AI to younger students - Supporting language learning alongside determining beneficial prompts	- Discuss how AI should be first introduced as a classroom resource - Allow for other language options and verbal prompt writing
Group 2 - Science	- AI is useful when used ethically, but the biggest concern is trying to teach students how to use it ethically and not abuse it, there needs to be a balance where students can use it as a tool and not as a way to not do any work.	- Student ethical use - CO2 emissions - Technology use of students - Basic skills lost - Water usage / human health in cities with data centers - Less of a connection between teacher and student	- Regulated chatbot for students- - Learn about ethical use of ai / models that use recycled water etc. - Continue using traditional methods of teaching / learning with supportive use of ai, rather than dependency on ai

Group 3 - Math/Science			
Group 4 - Other	4th grade teacher: students use it like google and to search for information. Teacher uses it for researching cultural information and where the regular curriculum does not provide. Kinder teacher- not very relevant for my grade level as independent workers with AI, but as a teacher, I use it to brainstorm when I am stuck	Having it write questions for the students is not as helpful. The questions lack complexity. AI is doing the thinking for you instead of students leading it.	Puts writing into the school's AI system to help refresh the eyes, as we as teachers can get kind of in a box.
Group 5 - Questions			

📚 You Do : Collective Prompt Library

Everyone: add your best prompts here as you discover them. This becomes a shared resource you all take home.

#	Your Name	Prompt Text	What It's For	Platform Used/Worked Best	Rating (⭐ 1-5)
1.	Petrina Miller	Draft a parent newsletter paragraph explaining that our class is starting a unit on Christopher Columbus and	My kinder class has started learning about the spice seekers and Christopher Columbus. A flyer could be posted on Class	Chat gpt	⭐⭐⭐⭐

		the spice trade. Tone: Warm, professional, excited Length: 150 words max Include: What students will learn, one way parents can support at home, and a sentence about how we're using AI tools responsibly in class. Additional prompt: can you add graphics that would interest a five or six year old and make a one page flyer with summary can you do the same flyer in Spanish?  	dojo so that parents are informed about what we are learning in class.  		

2.	Isabel Lopez	Draft a parent newsletter paragraph explaining that our class is starting a unit on endangered species Tone: Warm, professional, excited Length: 150 words max Include: What students will learn, one way parents can support at home, and a sentence about how we're using AI tools responsibly in class.	Project after our Middle school science STAAR	ChatGBT	⭐⭐
3.	Naline Beshay	Generate a math explanation of polynomial division for 11th grade students. IMPORTANT: Intentionally include 2-3 subtle errors that a student should be able to catch using: - Their textbook - A calculator - Prior knowledge from graphing polynomials and factoring quadratics I will use this as a "Check the Machine" classroom activity. Do NOT tell me where the errors are.	"Check the Machine" classroom activity on polynomial division	ChatGPT	⭐⭐⭐
4.	Amanda del Rio Suarez	I teach 11th grade honors physics. Create a 75-minute lab aligned to TEK PHYS.8.C investigate and analyze characteristics of waves, including velocity, frequency, amplitude, and wavelength, and calculate using the relationships between wave speed, frequency, and wavelength; Include: - A real-world	I wanted a lab on waves	Tried all 3 platforms I liked a mix of Chatgpt & Claude	⭐⭐⭐⭐ Great lab options, great analysis questions. Not so great on the differentiation. Gemini was the worst.

		hook that connects to students' lives - 3 differentiated lab prompts of the same activity (approaching, on-level, extending) - with analysis questions - Materials list (assume a typical classroom budget) Format the lab as: Objective > Hook > Lab > Analysis Questions > Extension			
5.	Nicole Burye	I teach 7th grade accelerated general science. Create a 105-minute lesson aligned to MS-LS2-3.: Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. Include: - A real-world phenomenon Warm-up that connects to students' lives (chula vista, CA) - 3 differentiated activities (approaching, on-level, extending) - One formative assessment check - A rubric for the formative assessment check - Materials list (assume a typical classroom budget) Format the lesson as: Objective > Hook/Warm-Up > Activities > Assessment > Extension	My 7th grade accelerated students are starting a new lesson segment on matter cycling and energy flow. It is important that our lesson plans for this segment align to the standard.	Claude	⭐⭐⭐ Nicely formatted and easy to follow
6.	Desteny Becerra	I teach 7th grade science. Create a 53-minute lesson aligned to MS-LS1-6: Construct a scientific explanation based on evidence for the role of photosynthesis in the	Used for like days 2 or 3 of the photosynthesis unit	ChatGPT	⭐⭐ Jumps straight into the lesson and doesn't let the students explore to

		cycling of matter and flow of energy into and out of organisms. Include: - A real-world hook that connects to students' lives - 3 differentiated activities (approaching, on-level, extending) - One formative assessment check - Materials list (assume a typical classroom budget) Format the lesson as: Objective > Hook > Activities > Assessment > Extension			see what plants need for photosynthesis and what they give out. Instead, it just gives it all to them on the second day.
7.	Kyla Baker	Create a review for a 45 minute block that is differentiated for the 9th grade biology class (texas) that is covering tek 5.B Differentiate this for three levels: 1. Approaching: Students who need to understand the basics 2. On-level: Students meeting grade-level expectations, They are able to explain the topic. 3. Extending: Students ready for deeper challenge (make this more open ended and lean on the critical thinking side) Keep the same core learning objective but adjust complexity, vocabulary, and support structures.	I use this for review stations, so I spilt the kids in groups depending on how the scored throughout the unit.	Gemini	⭐⭐⭐ If I'm not a fan of what it produces for me I sometimes jump over to drift for my lower level kids to get an article and quiz.
8.	Dylan Walling	Draft a parent newsletter paragraph explaining that our class is starting a unit on reproduction.	I have an IB lesson about reproduction next week which can be explicit, so it's important	ChatGPT	⭐⭐⭐

		Tone: Warm, professional, excited Length: 150 words max Include: What students will learn, one way parents can support at home, and a sentence about how we're using AI tools responsibly in class.	for parents to be informed about it.		
9.	Elizabeth Hargrove	Using my existing lesson plan (attached PDF). Differentiate this 5th grade level multiples lesson plan for the following three levels: 1, Approaching: Students who need scaffolding with math facts 2. On-level: students meeting grade level expectations 3. Extending: students ready for deeper challenges. Keep the same core learning objectives but adjust complexity, vocabulary, and support structures.	This is for a lesson I completed on Wednesday in which the student I had was excelling and another was behind and I did not have the best differentiation so i want to practice how to make it better and help my students in future years.	ChatGPT	⭐⭐⭐
10.	Amy DeGroat	I teach 4th grade science. Create a 30-minute lesson aligned to 4-PS4-1 Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.. Include: - A real-world hook that connects to students' lives - 3 differentiated activities (approaching, on-level, extending)	Future science lesson	CoPilot	⭐⭐⭐

		- One formative assessment check - Materials list (assume a typical classroom budget) Format the lesson as: Objective > Hook > Activities > Assessment > Extension Additions: Add sample student responses Question: How many more 30 minute lessons to teach this standard Create a 4-level rubric (Beginning, Developing, Proficient, Advanced) for this standard: [4-PS4-1 Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.] For each level, describe: - What the student CAN do at this level - Observable evidence (what you would see/hear) - Example student work or response Format as a table.	To better evaluate what students level of understanding		5 Stars or the rubric

11.					⭐
12.	Caitlyn Bridge	I teach high school biology. Create a 70-minute lesson aligned to NGSS HS-LS2-7? Include: - A real-world hook that connects to students' lives - 3 differentiated activities (approaching, on-level, extending) - One formative assessment check - Materials list (assume a typical classroom budget) Format the lesson as: Objective > Hook > Activities > Assessment > Extension	Future science lesson to help students connect an ecology unit with real-world problems/examples	ChatGPT	⭐⭐⭐
13.	Kylee Robinson	I teach 11-12th grade forensic science. Create a 45-minute lesson aligned to the Texas TEK: "determine cause and manner of death from an autopsy report obtained through resources such as case studies, simulated autopsies, and dissections". Include: - A real-world hook that connects to students' lives - 3 differentiated activities (approaching, on-level, extending) - One formative assessment check - Materials list (assume a typical classroom budget)	Creating a lesson for a specific forensic science standard (death investigations).	Claude	⭐⭐⭐⭐

		Format the lesson as: Objective > Hook > Activities > Assessment > Extension			
14.					⭐
15.	Brandi Bass	Create a 4-level rubric (Beginning, Developing, Proficient, Advanced) for this standard: 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.* For each level, describe: - What the student CAN do at this le vel - Observable evidence (what you would see/hear) - Example student work or response Format as a table.	Creating a model of an animal That shows how they disperse seeds	I used Gemini because I only have used Chatgbt	⭐⭐⭐
16.	Mesina Kee	Draft a parent newsletter paragraph explaining that our class is starting a unit on Force and Motion. Tone: Warm, professional, excited Length: 150 words max Include: What students will learn, one way parents can support at home, and a sentence about how we're using AI tools responsibly in class.	Newsletter for Parents	Chat Gpt	⭐

17.	Cinthia Mendoza	I teach 10th grade chemistry. Develop a 90 minute lesson on teaching how to calculate ph and Poh	Lesson plan on calculating ph and poh	gemini	⭐
18.	Collin Clark	I teach secondary math 3. Create a 85-minute lesson aligned to Know and apply the Remainder Theorem: For a polynomial p(x) and a number a, the remainder on division by x – a is p(a), so p(a) = 0 if and only if (x – a) is a factor of p(x).. Include: - A real-world hook that connects to students' lives - 3 differentiated activities (approaching, on-level, extending) - One formative assessment check - Materials list (assume a typical classroom budget)	Upcoming lesson about reminders of polynomial division and how that relates to the factors/roots of the polynomial	Chat Gpt	⭐⭐⭐ Lesson has some good moments, i would pick and choose certain pieces not following it exactly
19.	Crystal Seeley	7th grade science using the OpenSciEd curriculum which aligns with NGSS. Create 5 inquiry-based science problems for 7th grade student, one per day. Requirements: Each problem should take 15-20 minutes. Progress from concrete to abstract across the week. Include at least one problem that connects to a real world context. Aligned to OpenSciEd unit 7.4	Additional out of class time opportunities (homework- but we don't tend to give homework/ but students and parents have shown interest in how to engage with science content outside of science class) or extension ideas for test questions	Claude	⭐⭐⭐
20.	Catherine Hooker	Please generate a physics explanation of how white light contains all of the colors for high school students. IMPORTANT: Intentionally include 2-3 subtle	Would use something like this as an activity in the classroom. This sort of activity would be to give students the opportunity to find and fix any and all mistakes in content that they are viewing.	claude	⭐⭐⭐

		errors/common misconceptions that a student should be able to catch using: • Their textbook/class notes • A calculator • Prior knowledge from real life situations I will use this as a "Check the Machine" classroom activity. Do NOT tell me where the errors are.	I would also use it as a way to help them develop the skills needed for them to identify and fix their own mistakes on tests, assignments, and in life in general.		
21.	Liz Gilroy	I teach 3rd grade science. Create a 45-minute lesson aligned to 3-LS4-1. Include: - A real-world hook that connects to students' lives in NM - 3 differentiated activities (approaching, on-level, extending) - One formative assessment check - Materials list (assume a typical classroom budget) Format the lesson as: Objective > Hook > Activities > Assessment > Extension ask me questions about prompt as needed, minimize # of tokens, criticize everything	Create a place-based lesson plan for my classroom.	Gemini	⭐⭐
22.					⭐
23.					⭐

24.					⭐
25.					⭐

🌐 Transfer: Shared Lesson Idea Board- CRAFT in your space

Everyone adds a CRAFT lesson idea they'll actually try. This is our collective gallery of AI-powered STEM lessons.

#	Your Name	Lesson Title	Subject / Grade	How AI Helps	How Students Verify
1.	Petrina Miller	Life cycles	kinder/life science	Provides visuals and gives ideas for lesson extensions.	Usually hands on experiments of guiding questions and explanations of DCI
2.	Kyla Baker	Ecosystems	9th grade Biology	Creating visuals, different hooks for each day of the lesson, and connections to their everyday life	Ending with a CER seeing where students make the connections from the hooks to their daily lives. A quick check on ecosystem stability.
3.	Desteny Becerra	Photosynthesis	7th grade	Good for creating phenomena	Students will think of own experiences and see how what they know relates to science
4.	Kylee Robinson	Chat with Bill Nye (Chatbot)	11-12 Geoscience	Focuses student material sourcing	Use chatbot as a personal tutor while comparing to instructor-provided notes (applicable to any geoscience concept)
5.	Collin Clark	Graphing Polynomials	11 math	Designing of lesson, and ideas	Students will graph by hand using various methods and compare to the different results of the LLMs

6.	Nicole Burye	Understanding Food Webs	7th-grade general science	Designing food webs from class data using AI to visualize connections in picture format will really help my visual learners.	Students will verify by comparing their generated food webs with similar food web diagrams from their textbook. Students will also check their data against the generated food web to verify the accuracy of the generated diagram.
7.	Isabel Lopez	Endangered Species	8th grade science	Lesson plan / help create rubric for project	Students can use AI for the endangered species projects by researching habitats and threats, analyzing biodiversity data, and creating predictive models of habitat loss. Students will be able to visualize data, track populations through image recognition, and simulate conservation scenarios.
8.	Dylan Walling	Fossils	10th Bio	Designing of lesson, and ideas	Lateral reading
9.	Amanda del Rio Suarez	Mechanical Waves	HS Physics Honors	Love the (C)contextualize easy hook, no thinking on my part needed.	Have facilitated discussion with students connecting waves to students' everyday lives.
10.	Elizabeth Hargrove	Subtracting Mixed Numbers	5th grade math	AI really helps with the creating the set up and and the CRAFT to help me model	

				the material and go over misconceptions	
11.	Amy DeGroat	Research	4th Grade	AI gives lots of answers, but they don't always know if it's correct. Kids can ask Google about X and get answers. I can help rework the prompts that give resources that cite sources.	Students compare their answer to their prompt vs the one with extra info (for kids, at X Lexile level, from X sources)
12.	Catherine Hooker	Any unit really	High School Physics	I see CRAFT as a great way to get students to explore common misconceptions in any field of science really. I personally would use this to force my students to question their own thinking or to debunk any and all pseudoscience they encounter via social media.	For debunking pseudoscience: - I would have students pick a tiktok/influencer to focus on - Have students identify a specific claim made - Have them identify the intention (hidden agenda) behind the influencer/tiktok - Have them research the claim made and compare to actual science via reputable sources - Lastly, have students identify concepts/vocabulary that makes the claim seem credible

13.	Crystal Seeley	Answering student-generated questions regarding unit's phenomenon	7th Grade Science	Students utilize AI to help answer their questions	Students verify through digging deeper into the information provided
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