

# Leveraging AI in our Professional Work



April 23, 2025

# Mission Statement

**The mission of the Syosset Central School District is to prepare students to thrive in both the future we imagine and one which may evolve in ways yet to be envisioned.**

# Board Goals

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[Board of Education Goals 2025](#)

We will:

- Create individualized learning experiences
- Utilize and foster a mastery of evolving technologies and design experiences that cultivate collaboration skills
- Foster wellness, balance, and a deep appreciation for multiple perspectives, empowering students to navigate evolving challenges with confidence and compassion
- Foster a strong, collaborative culture and make meaningful connections

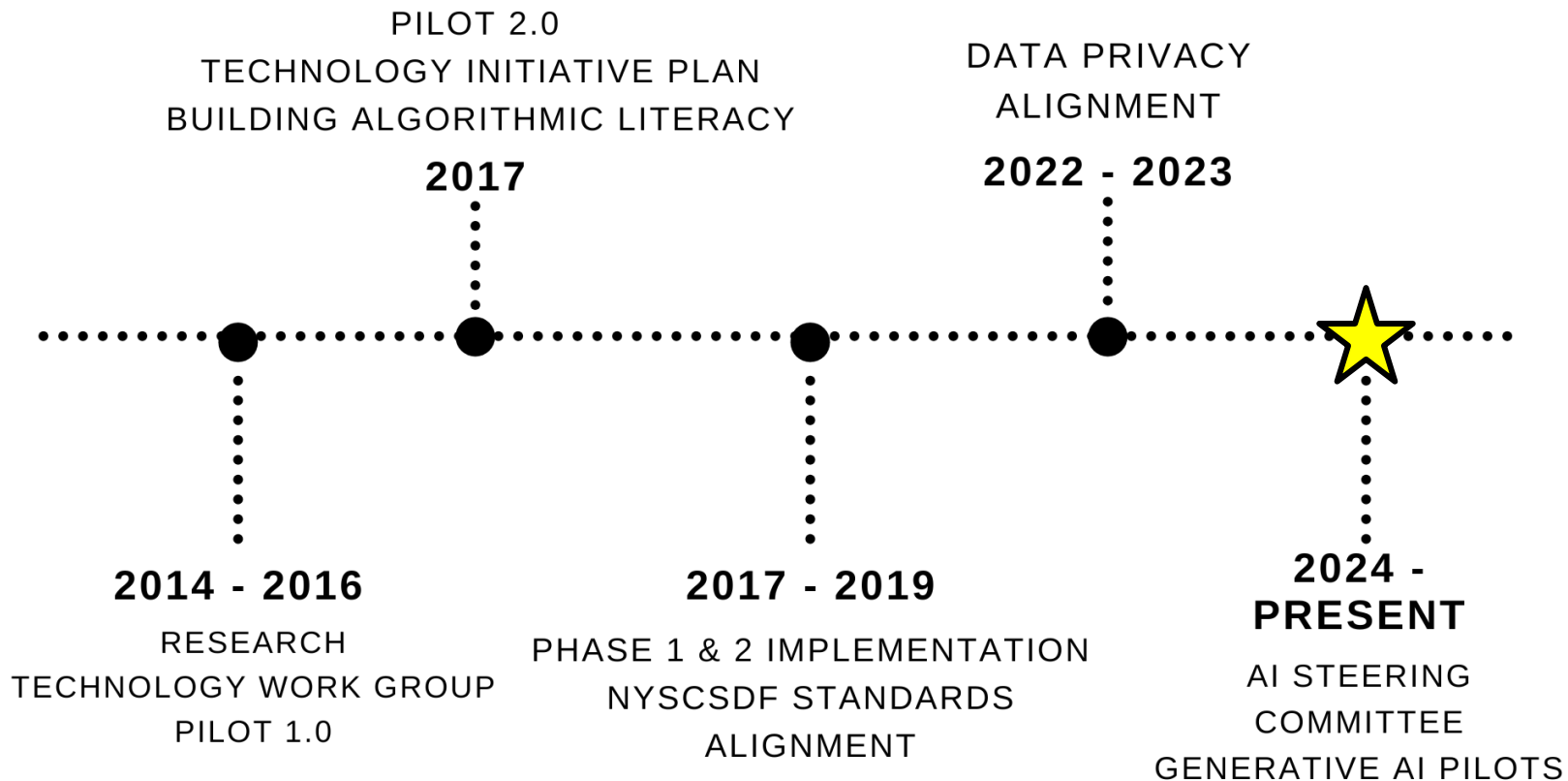
## **Instructional WHY**

**We have an obligation to prepare our students to be responsive to a continually changing world and take agency of themselves, their communities and society as a whole.**

## **Technology WHY**

**We believe that through education, we can ignite curiosity that fuels motivation, innovation, collaboration, and problem solving skills using technology as a pivotal tool to maximize student contributions in an ever-changing world.**

# Technology Work Group Journey



# AI Pilot Journey

## 9/2024 Increased capacity around AI Literacy

- Data Privacy and Security
- Responsible & Ethical Use
- Awareness & Discrimination in AI Tools

## 10/2024 Prompt Literacy

Educator-in-the-Loop

## 1/2025 Pilot Program

- Aligned to instructional goals
- Assigned Google Gemini licenses

## Exploration

## 3/2025 AI Pilot Showcase

Connected pilots across buildings and departments

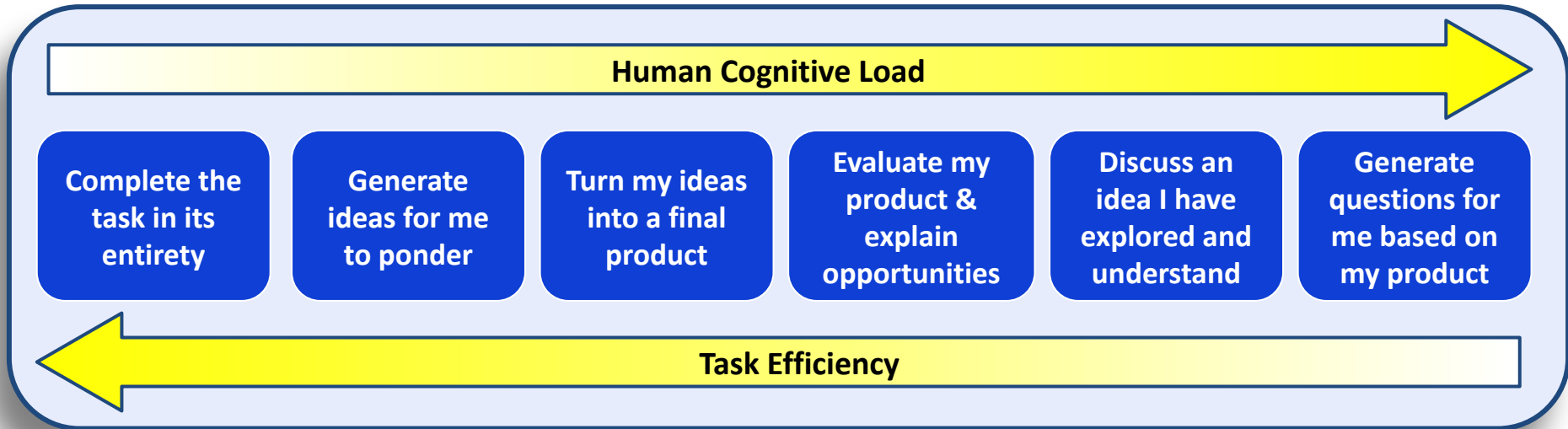
## Evaluate & Celebrate

# Connections, Collaboration, K-12 Community

- Pilot Program
  - 32 Pilot projects, 94 teacher participants from all buildings and departments
- Educator-in-the-Loop
  - Focus on strategic prompting and critical analysis
- Aligned to instructional goals
  - Aiming to enhance areas such as learning design, instructional support, differentiation and personalized learning, and data analysis

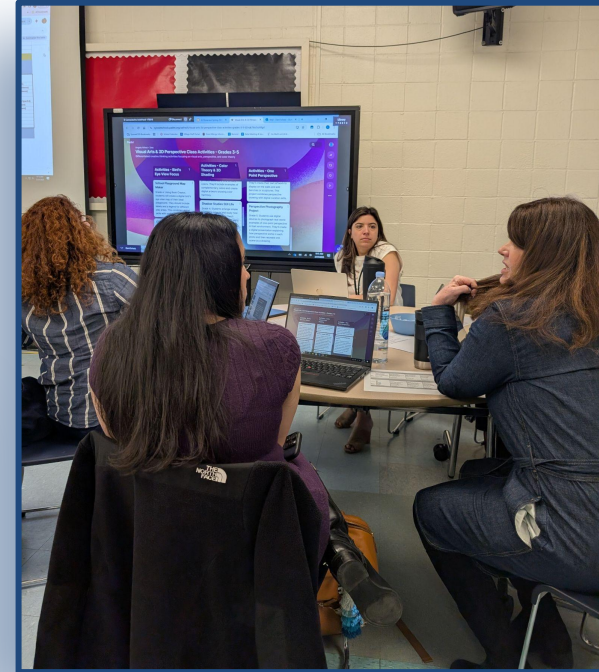
# AI Theoretical Framework - Draft

The framework helps educators think about how they use AI in their professional work.





# AI Pilot Showcase Examples



# KEY TAKEAWAYS

## AI PILOT SHOWCASE

### TEACHER - DRIVEN INNOVATION

In all experiences, the teacher leveraged AI as a collaborative partner in diverse and creative ways to enhance their teaching practices. From generating content and personalized learning experiences, to streamlining workflows, AI is allowing for personalization and innovation in the classroom.

### STUDENT IMPACT

The AI pilot program is fostering Increased student engagement, providing personalized learning experiences, and creating diverse engaging curriculum resources to support K-12 learners.

# **5th Grade Shark Tank™**

## **Project Based Learning**

**A.P. Willits & Berry Hill Elementary**

# 5th Grade Shark Tank™ Project Based Learning

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The **Shark Tank™ project** is a comprehensive, hands-on learning experience where student teams invent a product, develop a functional prototype or business model, craft a detailed marketing strategy, perform cost analysis to determine pricing and potential profits, and ultimately pitch their innovative idea to a panel of judges, much like the popular television show.

This interdisciplinary project integrates **creativity, collaboration, critical thinking, and practical business skills**, while specifically applying mathematical concepts such as basic operations and financial literacy.

Thanks to **Gemini**, we've been able to build a **robust framework for this project**, design tailored lessons, create differentiated worksheets that cater to individual learning styles, and effectively introduce our students to the fundamentals of AI and the input/output process.

# Guiding the Project with A.I.

Throughout the process, students and teachers leveraged digital tools and **AI assistance for research, data analysis, and presentation development, culminating in a final pitch** that includes an investment proposal in exchange for company equity.

The teachers were able to create a **framework** from the prompted end goal.

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**AI Prompt (Project Objective):** Students will work in teams to invent a product, build a prototype, develop a marketing plan, calculate costs, set a price, and pitch their idea to a panel of judges. The math skills they'll use include multiplication, division, addition, subtraction, decimal operations, and basic financial literacy (like calculating costs, profits, and determining pricing).

## Frameworks **Six** Objectives

Interviewing

Research

Idea  
Generation

Product  
Development

Marketing

Pitch and Sell

# Highlighting Part of the AI process

A glimpse into **Goal 1, Lesson 3**: Review Analysis – Discussing team strengths and areas in need of support

## ✓ Prompt

“Fifth grade students will be working in teams on a project. This Shark Tank like project will ask students to invent a product or service, build a prototype, develop a marketing plan, calculate costs, set a price and pitch their idea to a panel of judges. We would like the teams to be made up of students with different strengths and abilities that will contribute to a balanced business model... Please generate 10 questions that include multiple choice and sliding scales that can help us identify a variety of student strengths and areas in need of support for this project so that we can formulate these groups... Keep in mind the importance of communication skills, mathematics skill levels, leadership skills, public speaking comfortability, technological creativity and engineering.”

When working in a group, which role would you choose? \*

- ☐ Leader: likes to take charge, make decisions, and keep the group organized and on track.
- ☐ Collaborator: enjoys sharing ideas, working together with others, and making sure everyone's voice is heard.
- ☐ Listener: good at listening to others' ideas, giving helpful feedback, and making sure everyone feels understood.
- ☐ Varies depending on the group: can take on different roles depending on what the groups needs. Sometimes you might lead, sometimes you might collaborate more, and sometimes you might focus on listening.

## Input

Give me a brief description of each students strengths and why they were grouped together.

## Output

This group combines building interest with varied technology comfort levels. Student 1's adaptability and strong math skills compliment Student 2's collaborative approach and technology proficiency. Student 3 provides a middle ground in both areas, offering support to both teammates.

# The Path Ahead...

This project, while expertly **organized and supported by AI**, truly came to life through the involvement of **real-world entrepreneurship experts**: the **Virtual Enterprise** students at Syosset High School. Their upcoming in-person and virtual meetings with the elementary students will create a powerful mentorship dynamic, encouraging our younger learners while providing a valuable opportunity for the high school students to showcase the culmination of their hard work this year.

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**Final Goal:** Our entrepreneurs will be showcasing their business at a school-run trade show where they will pitch their ideas to the **SHARKS**.

# Utilizing Gemini to Create Enjoyable, Decodable Texts

**Robbins Lane Elementary**





# Utilizing Gemini to Create Enjoyable, Decodable Texts

Grades K, 2, and 4

## Application Category: Instructional Support

- Our team's goal is to learn how to utilize Gemini in order to help us create decodable texts that include specific phonics skills, while also tailoring the storyline and theme to match the reader's personal interests.

## Original Prompt:

"Write a ten-page decodable story about a kindergarten student named Tyler who is playing basketball. Each 'page' should be one short sentence. Use only CVC words with short a, i, and o sounds. Include the sight words 'a,' 'the,' and 'is.' The story should focus on Tyler dribbling, passing, and shooting the ball. Use simple, repetitive sentence structures, but try to vary the verbs and add a little more action."

## Improved Prompt (After uploading scholarly articles):

- "Based upon what you learned from these documents, what is the criteria for evaluating the quality of decodable texts?"
- "Keeping this criteria in mind, create a decodable text for a second grade student, with a storyline about cats."

### Resources

Mesmer, Heidi Anne E. "**Decodable text: A review of what we know.**" Literacy Research and Instruction 40.2 (2000): 121-141.

Pennell, Ashley E., et al. "**A Healthy Diet for Beginning Readers: Decodable Texts as Part of a Comprehensive Literacy Program.**" The Reading Teacher 77.5 (2024): 673-684.

Pangari-Schneller, Rosa (2024) "**Let's /r//ē//d/: Using Decodable Texts with Beginning Readers,**" Essays in Education: Vol. 30: Iss. 2, Article 10.



# Publishing Story in Canva

## CVC Words

bad, big, cat, dog, hid, ran,  
sad

## Consonant Blends

last, tree

## Digraphs

she, this, that, with

## Baseword / Suffix

helped, looked, scared, walked,  
wanted

## Vowel Teams

away, mean, play, see

## Vowel-Consonant-E

alone, home

## The Lost Kitten



AI image generator



Generate your own



The little kitten was lost. He had wandered away from his home and couldn't find his way back. He was all alone.

1



The kitten was so happy. He was home at last. He would never wander away again.

6

# Creating Stories Aligned with Foundations

## Trick Words

always, carry, change, city,  
eight, every, family, house,  
large, night  
something

## Words of the Day

bravely, cozy, duty, predict  
safety, shy

## The Cozy Blanket

Foundations Level 2, Unit 7



The **family** had a **large**  
house in the **city**.

1



The child's safety was his  
duty. He would predict the  
child would feel safe with  
the blanket. He bravely went  
into the room and put the  
blanket on the child. "I will  
always protect you," he said.

6

# Designing Books for Different Grade Levels

## Kindergarten

Cvc words  
man pot can run fun

Sight Words  
the is has to we

### The Leprechaun

cvc decodable



The man is little. The man is a  
leprechaun.

1



The leprechaun sat on the  
pot. "The gold is all mine!" The  
leprechaun is fun!

6

## Fourth Grade



### THE CASE OF THE BROKEN COMPASS

Toby, a Wolf cub scout with a mop of sandy brown hair and a gap-toothed grin, bounced on the balls of his feet. Today was the day! The Big Hike! His pack, Troop 42, was venturing into Hemlock Hollow, a sprawling park with towering trees and winding trails. Toby clutched his brand-new compass, a gift from his grandpa, a retired park ranger. It was shiny and silver, with a bright red needle that always pointed north. Or, at least, it was supposed to.



1

#### The Curious Case of the Crooked Compass Comprehension Quiz

Name: \_\_\_\_\_

Date: \_\_\_\_\_

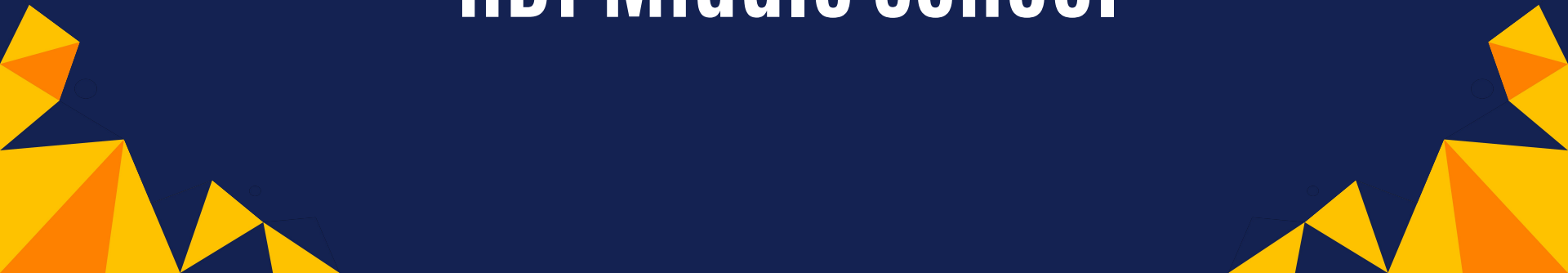
Multiple Choice (Choose the best answer):

- 1) What was Toby's favorite thing about his new compass?
  - a) It was bright red.
  - b) It was shiny and silver.
  - c) It was a gift from his grandpa.
  - d) All of the above.
- 2) Why did Toby and Leo leave the main trail?
  - a) They wanted to find a shortcut.
  - b) They saw some interesting red mushrooms.
  - c) They were trying to catch a squirrel.
  - d) Mr. Johnson told them to explore.
- 3) What happened to Toby's compass?
  - a) He dropped it and it broke.
  - b) The needle started spinning wildly.
  - c) Leo accidentally damaged it.
  - d) It got lost in the woods.

5

# **7th Grade Science: NGSS Ecology Project Enhanced with Gemini**

## **HBT Middle School**



# HBT 7th Grade Science Ecology Project - NYSSLS

The 7th grade science team at HBT redesigned our ecology unit which created a need for a new engaging unit project aligned with the new New State Science Learning Standards (NYSSLS)



## Prompts

- [Travel Brochure Project Prompts](#)



## Artifacts

- [Travel Brochure Project Description](#)
- [Travel Brochure Graphic Organizer](#)
- [Travel Brochure Rubric](#)
- [Student Work](#)

# HBT 7th Grade Science NGSS Ecology Project

The 7th grade science team at HBT redesigned our ecology unit, creating a need for a new unit project aligned with NGSS and engaging for students to partake in.



## Prompts

### Initial Prompt:

I am a New York State 7th grade science teacher in need of a project for my ecosystems unit. The project should be fun, engaging, and educational for students to participate in and make. The project should follow NYS NGSS.

### Follow-up:

That's good, but I'm looking to go a different direction. Can you design a project which requires students to create a travel brochure to travel to a specific ecosystem. It should require students to identify what biome the ecosystem is part of, at least 6 organisms that could be seen while in that ecosystem, and abiotic factors in that ecosystem.

# HBT 7th Grade Science NGSS Ecology Project

**Project Overview:** You will play the role of an "eco-tourism marketer" tasked with creating a creative and informative travel brochure for a national park! This brochure will entice potential tourists to visit and experience the wonders of this unique environment.

## **Project Steps:**

- 1. Research and Information Gathering:** You will research your chosen ecosystem, and complete the graphic organizer, focusing on the following key elements:
- 2. Biome and National Park:** Identify the biome your national park belongs to (ex: tropical rainforest, temperate deciduous forest, desert, coral reef, etc.). Clearly describe the general characteristics of this biome including where in the world it can be found, latitudes the biome is located, the general
- 3. Organisms:** Identify at least 6 specific organisms that can be found in your chosen ecosystem. These should include a variety of organisms. You must include at least 1 animal, 1 plant, and 1 fungi. The other 3 organisms are your choice, however they must each be from a different class!
- 4. Focus Organism:** Choose a different organism to focus on in more detail. Include its full taxonomy (Kingdom, Phylum, Class, Order, Family, Genus and species of the organism). Describe in depth its habitat, population, food sources, role in the ecosystem, etc.
- 5. Why should you visit:** On the back of the brochure, write a paragraph to convince people to visit your national park. Include at least 2 fun facts about your ecosystem and 2 "things to do" (ex: wildlife viewing, nature walks, photography, "must-see" attractions, etc.)



# HBT 7th Grade Science Ecology Project- Student Work



## HAWKSBILL TURTLE

Domain - Eukaryota  
Kingdom - Animalia  
Phylum - Chordata  
Class - Reptilia  
Order - Testudines  
Family - Cheloniidae  
Genus - Eretmochelys  
Species - Eretmochelys imbricata

Hawksbill turtles are mostly found in tropical waters, inhabiting coastal reefs, rocky areas, lagoons, and estuaries.

Hawksbill turtles are mainly spongivores, eating sponges, but they also eat algae, marine plants, and other invertebrates.

Hawksbill turtles are mostly found alone, unless mating with another turtle.

Hawksbill turtles main role in the ecosystem is to maintain healthy coral reefs by removing sponge.

Hawksbill turtles are prey for sharks, crocodile, large fish, and even humans.

## OPEN OCEAN

The Pacific Remote Marine National Monument is located in the Open Ocean. Open Oceans are typically found anywhere ranging from the arctic to the antarctic, but specifically the Pacific Remote Marine National Monument latitude is located between 0°13'N - 24°13'N. The monument usually receives around 160-200 inches of rainfall a year. Their typical temperature is 80°F (27°C), with sunlight reaching up to 1000 meters. The monument consists of 495,189 square feet and is made up of 7 islands, including Baker, Howland, Jarvis Island, Johnston, Wake, Palmyra Atoll, and Kingman Reef. It is located near the equator and in the Euphotic zone.

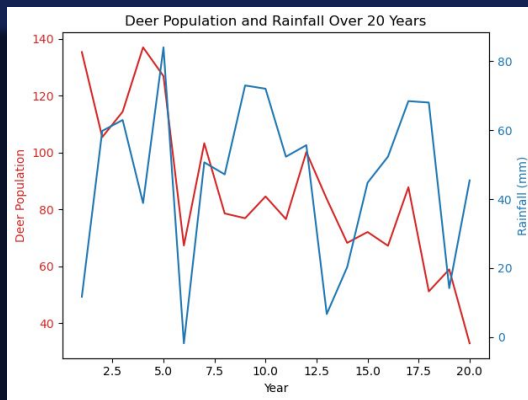
# HBT 7th Grade Science - NGSS - Using Evidence

## ✓ Prompt

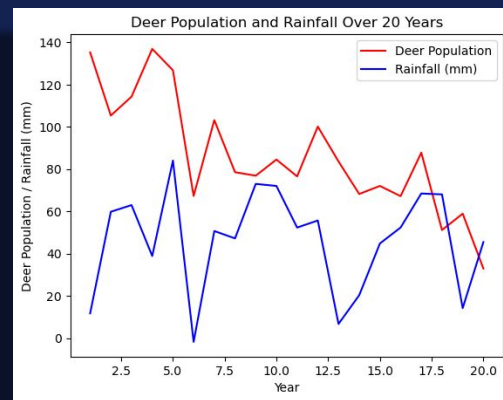
#1: I am starting with this standard "MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem".

Students should be able to support their claims about resource effects with evidence from the data they analyze". Can you give me a sample test question?

## ✓ Artifacts



Initial image created by Microsoft **Copilot**.



Second image created by **Copilot** after prompting.

\*\* Gemini was unable to create a graph for this question.  
Gemini's response: "insert graph here". \*\*

# **Gemini for Writing Feedback**

## **Syosset High School**



# Gemini for Writing Feedback

Syosset High School, grades 9-12

Category: Instructional Support

This pilot aimed to utilize Gemini to provide students with personalized writing feedback and targeted resources, ultimately improving their writing skills.

## Prompting Threads

- Gemini's Writing Feedback
- Individualized Writing Instruction
- Support for Struggling Writer

# Example 1 - Gemini for Writing Feedback

## PILOT TEAM: GEMINI FOR WRITING FEEDBACK (SHS)

**Prompt:** Study the following rubric so that you can use it to evaluate and provide feedback on student essays: (paste the [Foundations argument rubric](#)). Evaluate and provide feedback on the following argument essay: (paste [student essay](#))

### Content & Analysis (C):

- The essay introduces a claim (homework should not be assigned) but it's not particularly insightful or nuanced. It focuses primarily on the negative effects of homework, neglecting to explore any potential benefits in sufficient depth to effectively distinguish the claim from opposing viewpoints. While it mentions the argument for homework briefly, it quickly dismisses it. The analysis of the provided evidence is present but somewhat superficial. The essay relies heavily on summarizing the studies rather than deeply analyzing their implications.
- *Feedback:* Explore the counter-arguments to your claim. Acknowledging and addressing these opposing viewpoints can lead to a more comprehensive understanding of the issue. What do the results mean and how they connect to your claim? Could there be other factors influencing the results?

### Command of Evidence (C+):

- The essay presents some evidence from the provided sources, but the evidence is not always effective. The statistic about homework weakens the argument rather than strengthening it. The information is not presented smoothly. The citations are also inconsistent.
- *Feedback:* Double-check your statistics! An error like this can weaken your argument. Explain how the evidence supports your claim and connect them to your argument. Ensure you provide the date, and website for each source.

### Coherence, Organization, and Style (B-):

- The essay exhibits some organization, moving from the introduction to the body paragraphs and conclusion. However, the transitions between paragraphs could be smoother, and the essay sometimes jumps between ideas. The style is generally formal, but there are some instances of imprecise language and awkward phrasing.
- *Feedback:* Work on creating smoother transitions between your paragraphs. Each paragraph should flow logically from the previous one. Pay attention to your word choice and sentence structure. Avoid informal language and ensure your meaning is clear. Read your essay aloud to identify any awkward phrasing or grammatical errors.

### Control of Conventions (C+):

- The essay demonstrates partial control of conventions, with occasional errors in grammar, punctuation, and spelling. These errors do not significantly hinder comprehension but do detract from the overall polish of the essay.
- *Feedback:* Proofread carefully! Pay attention to common errors you make and try to correct them. Consider using a grammar checker or having someone else proofread your work.

# Example 2 - Individualized Writing Instruction

## PILOT TEAM: GEMINI FOR WRITING FEEDBACK (SHS)

**Prompt:** You are a high school English teacher, and you have a student who has trouble writing topic sentences that respond to all aspects of the writing prompt. Come up with a mini lesson and writing exercise to help her.

Alright class, let's talk about something crucial to strong writing: **crafting effective topic sentences, especially when a prompt has multiple parts**. I've noticed some of you are nailing one part of the prompt, but the other gets a little lost in the shuffle.

### The Problem: The "Partial Response" Topic Sentence

Imagine the prompt is: "Analyze how the setting and character in 'The Catcher in the Rye.'" A partial response topic sentence might be: "The setting in 'The Catcher in the Rye' contributes to the theme of isolation." While true, it ignores the character dialogue you'll address it at all.

### The Solution: The "Comprehensive Response" Topic Sentence

We need topic sentences that act like roadmaps for your paragraph, directly addressing *all* aspects of the prompt.

### Mini-Lesson: The "And/While/By" Formula

Let's use a simple formula to help you build these comprehensive topic sentences:

1. **Identify the Key Elements:** Break down the prompt into its parts: setting, character, and theme.
2. **Choose a Connecting Word:** Use words like "and," "while," or "by" to connect the elements.
3. **State the Main Idea:** Clearly express how these elements work together to address the prompt's central question.

### Applying the Formula to Our Example:

- **"And":** "The setting **and** character dialogue in 'The Catcher in the Rye' contribute to the theme of isolation **by** creating a sense of alienation."
- **"While":** "While the setting in 'The Catcher in the Rye' establishes a physical sense of isolation, the character dialogue **further emphasizes** this theme through Holden's cynical and disconnected speech."
- **"By":** "By utilizing both the isolating urban setting **and** Holden's disillusioned dialogue, Salinger effectively portrays the theme of isolation in 'The Catcher in the Rye.'"

### Why This Works:

- **Clarity:** The reader knows exactly what to expect in the paragraph.
- **Focus:** It forces you to consider how both elements are interconnected.
- **Structure:** It provides a strong framework for your analysis.

### Writing Exercise: "Prompt Breakdown & Topic Sentence Creation"



# Example 3 - Support for the Struggling Writer

## PILOT TEAM: GEMINI FOR WRITING FEEDBACK (SHS)

**Prompt:** You are a Special Education Coordinator, and a high school student's English teacher notices that he is having trouble with written expression, particularly with composing paragraphs that effectively respond to prompts, with organizing his thoughts in a coherent response, and with clearly explaining how his evidence supports his claims. The teacher has tried creating checklists of things the student should include in his paragraphs and providing graphic organizers to aid in creating a fluid response. The student has not had success with either of these supports. Suggest an alternative support for the teacher to try with this student.

### Strategy: Collaborative Paragraph Construction & Explicit Modeling with Think-Alouds

This strategy moves away from independent tools (checklists, graphic organizers) and toward a process. Here's a breakdown:

#### 1. Direct Modeling with Think-Alouds:

- The teacher selects a sample prompt similar to those the student struggles with.
- The teacher then models, step-by-step, how to construct a strong paragraph prompt.
- Crucially, the teacher "thinks aloud" during this process, verbalizing their internal thought process:
  - "Okay, the prompt is asking me to analyze the character's motivations. I need to identify the key points about the character's actions."
  - "Now, what evidence from the text supports this? I'm going to look for specific details that show their intentions."
  - "How can I connect this evidence to my main point? I need to explain why this is significant."
  - "Now, I'm going to organize these thoughts into a clear topic sentence and a concluding sentence."
- This explicit modeling provides the student with a clear, visible example of the process involved in effective paragraph writing.

#### 2. Collaborative Paragraph Construction:

- After the modeling, the teacher and student work together on a new prompt.
- The teacher guides the student through each step, prompting them with questions:
  - "What's the first thing we need to do to understand the prompt?"
  - "Where can we find relevant evidence in the text?"
  - "How can we phrase that evidence to support our claim?"
  - "Let's work together to write a topic sentence that reflects our main idea."
- This collaborative approach allows the teacher to provide immediate feedback and support, addressing any misconceptions or difficulties in real-time.
- The teacher can even write down the student's responses as the student dictates them to help with the physical writing process.

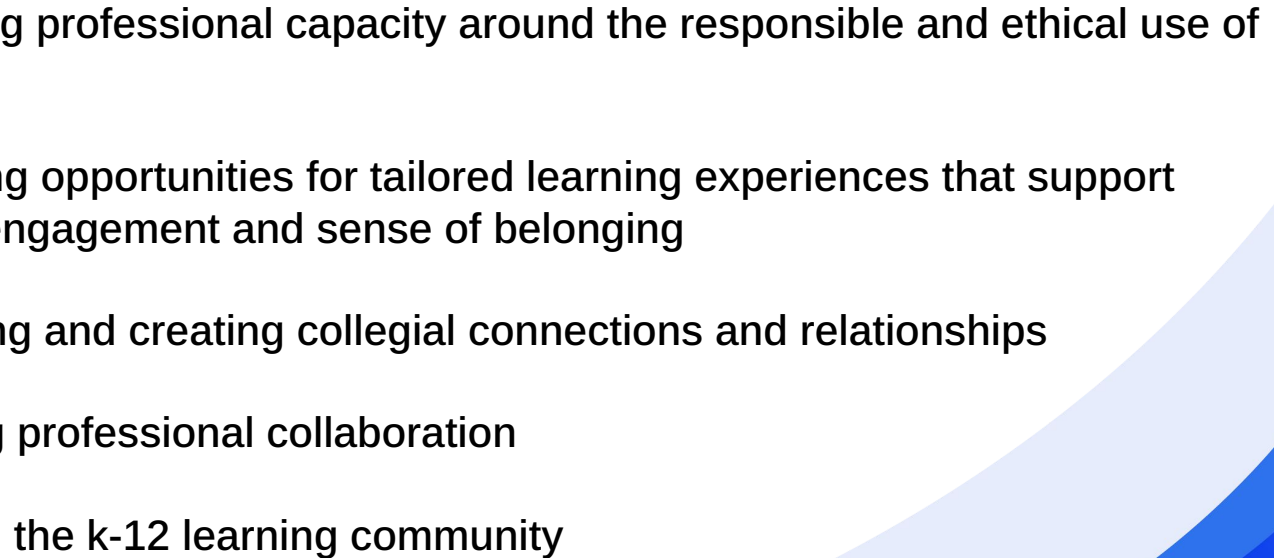
#### 3. Gradual Release of Responsibility:

- As the student becomes more comfortable, the teacher gradually reduces the level of support, allowing the student to take on more responsibility for each step.
- This could involve having the student complete certain sections of the paragraph independently, while still providing guidance and feedback.
- The teacher can provide sentence starters, or partial paragraphs that the student will finish.

#### 4. Focus on Evidence-Claim Connections:

- A key focus should be on explicitly teaching the student how to explain the connection

# Impact

- ★ Increasing professional capacity around the responsible and ethical use of AI
  - ★ Enhancing opportunities for tailored learning experiences that support student engagement and sense of belonging
  - ★ Deepening and creating collegial connections and relationships
  - ★ Fostering professional collaboration
  - ★ Elevating the k-12 learning community
- 
- A decorative graphic consisting of several overlapping, curved bands of blue and light blue, creating a wave-like effect that flows from the bottom left towards the top right of the slide.



# Next Steps

- ★ Engage the entire faculty and staff during Superintendent's Conference Day (August 2025)
- ★ Support a Pilot 2.0 during the 25-26 school year
- ★ Explore student-facing Ed. law 2D compliant digital resources

# Thank you!

David Steinberg, Assistant Superintendent of Secondary Curriculum, Instruction and Assessment

Dr. Jeanette Wojcik, Assistant Superintendent of Elementary Curriculum, Instruction and Assessment

Christine Payne, Director of Instructional & Administrative Technology

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Tyler Gentilcore, 2nd Grade Teacher, Robbins Lane Elementary School

Victoria Greco, 5th Grade Teacher, Willits Elementary School

*Our sincerest thank you to all of our presenters and AI Pilot participants for their innovation and commitment to exploring new possibilities that enhance teaching and learning across our schools.*