

Waterford Innovation Team





- Created after a group attended SLATE conference last year and conducted PD for staff
- Staff nominated colleagues to be a part of this team.
- Team Members
 - Joe Bianchi (Math), Matt Hawkinson (Science), Chris Hicks (English), Gary Lilla (IT), Mark Peperkorn (Admin), Leanne Pomeroy (Library), Matt Read (Social Studies), Nick Roeglin (English)

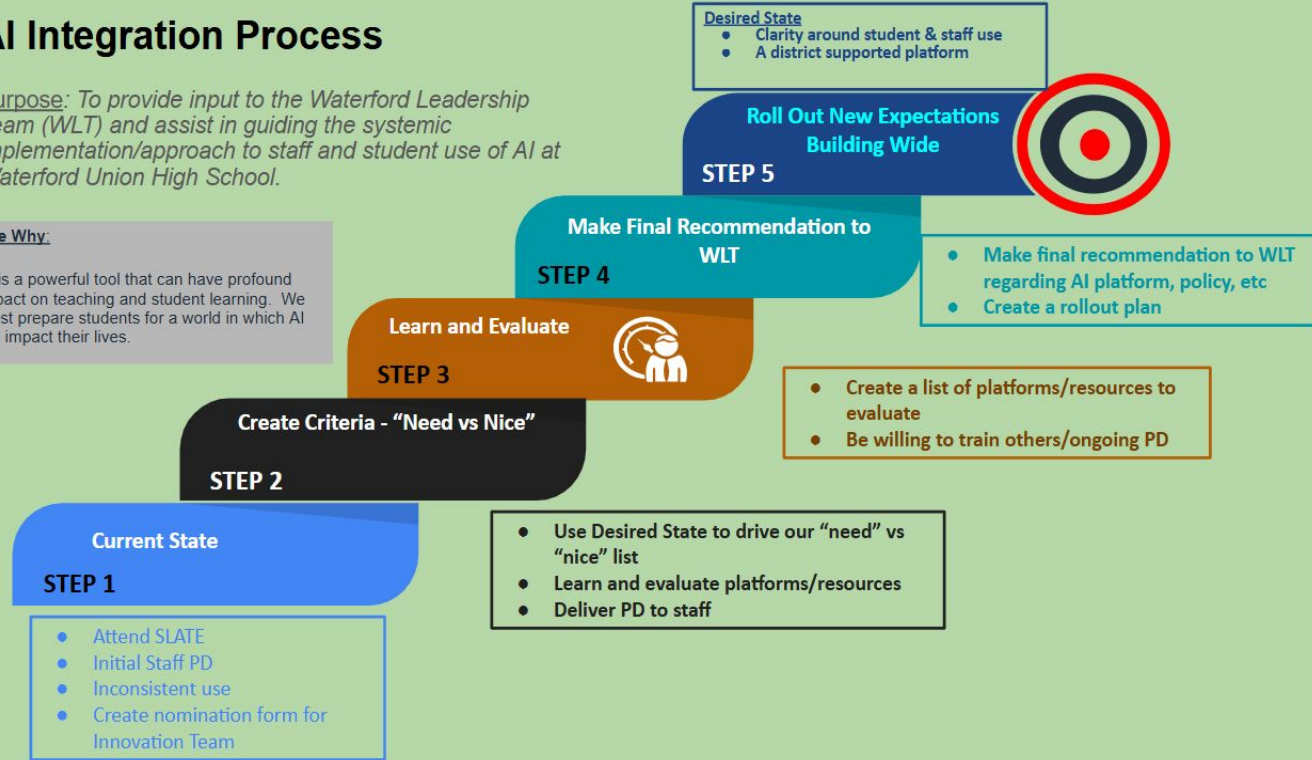


AI Integration Process

Purpose: To provide input to the Waterford Leadership Team (WLT) and assist in guiding the systemic implementation/approach to staff and student use of AI at Waterford Union High School.

The Why:

AI is a powerful tool that can have profound impact on teaching and student learning. We must prepare students for a world in which AI will impact their lives.





- 5 Themes:
 - Define clear school policies for ethical AI use and academic integrity.
 - **Train staff (AI Readiness)** to use AI immediately for differentiated instruction and high-level question generation.
 - Integrate a **few select AI tools** into the curriculum, teaching students *when* and *how* to use them as a functional tool.
 - Focus student work on critically analyzing AI output to deepen learning and understand its pitfalls.
 - Maintain a continuous, open dialogue across the school to adapt policies and share effective AI teaching methods.



AI Defined

Generative AI tools are computer programs that use advanced technology to mimic human intelligence, such as understanding and processing language, recognizing images, and making decisions. AI tools come in many forms and types. Reviews of the tool have shown it can provide valuable and accurate answers to various prompts. It can write essays and stories, generate test questions, solve math problems, brainstorm ideas, and write code.

What is AI?

AI is a tool that can enhance one's practice and assist with instructional needs.

AI is a tool that can support students in achieving grade level curricular outcomes.

AI is a Large Language Model (LLM), which generates text based on patterns and probability.

AI is a tool to generate/brainstorm ideas.

AI is a tool used to autocorrect spelling, compose emails, and correct grammar.

What AI is Not

AI is not a curriculum.

AI is not a replacement for human interaction or explicit instruction.

AI is not fact-checked, emotionally intelligent, and is not without bias.

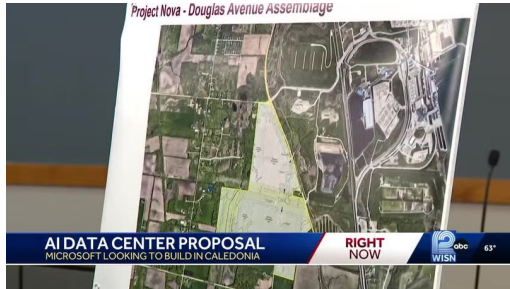
AI is not meant to complete writing tasks but rather it offers suggestions.



The Divide Around AI

The [*Economist* \(2023\)](#) described two main camps:

- **AI “Doomers”** – focus on risks and dangers
- **AI “Boomers”** – focus on potential and progress
- Despite their differences, both agree:
 - AI will deeply shape the future.





Educators' Varied Reactions:

- Teachers respond differently deepening on:
 - **Who's using AI:** Students vs. teachers
 - **Help! I'm drowning! Is there an AI tool that can...**
 - **Help! My students are using AI to do their...**
 - **Purpose of use:** Creativity, feedback, **time-saving**, or learning support
 - **Understanding of the tools:** Comfort and confidence grow with exposure



Four Commonsense Principles for Using AI in Education

1. **Invite AI to the table.** - Try it — you can always dismiss it if it's not useful.
2. **Be the human in the loop.** - Accuracy, ethics, and fairness are always *your* responsibility. (Human - AI, Human)
3. **Treat AI like a person — tell it who to be.** - Set the tone or perspective you want it to take.
4. **Assume this is the worst AI you'll ever use.** - The technology is evolving fast — today's flaws will lead to tomorrow's improvements.

"Be curious, stay human, and keep learning alongside the technology."



Enter the Following Prompt:

"I am a [position] who works with [students' age/subject]. One of my regular tasks is [task]. How might generative AI help lighten the load of this task? List some ideas, and note any questions or information you'd need to explore further."



ChatGPT





Follow Up Prompts:

- Say more about ____
- I am not sure what you mean by _____ Please Explain
- The idea _____ is interesting, but I am wondering about
- This is a good idea, but it won't work because _____ Is there anything similar that would assist me with this task



ChatGPT





AI can be very intimidating to people - what other changes have intimidated people over time

Technological Shifts That Intimidated People

1. The Printing Press (15th century)

- **Initial fear:** It would spread misinformation and undermine the authority of the Church and scholars.
- **Reality:** It democratized access to knowledge and accelerated literacy and education across the world.

2. The Industrial Revolution (18th–19th century)

- **Initial fear:** Machines would replace all workers and destroy livelihoods.
- **Reality:** Jobs changed, not disappeared — new industries, roles, and skills emerged (e.g., mechanics, engineers).

3. Electricity (late 19th century)

- **Initial fear:** It was dangerous and unnatural; people worried it would cause fires or even harm their health.
- **Reality:** It transformed homes, factories, and cities, becoming essential to modern life.

4. Automobiles (early 20th century)

- **Initial fear:** Too fast, too noisy, unsafe — and they'd ruin traditional horse-based economies.
- **Reality:** They reshaped cities, travel, and commerce.

5. Personal Computers (1970s–1980s)

- **Initial fear:** Too complicated; they'd make people lazy or unemployable.
- **Reality:** They became indispensable tools for work, creativity, and communication.

6. The Internet (1990s)

- **Initial fear:** Unsafe, impersonal, and filled with unreliable information.
- **Reality:** It became the backbone of global communication, learning, and business.

7. Smartphones & Social Media (2000s)

- **Initial fear:** They'd destroy attention spans and social relationships.
- **Reality:** They changed how we connect, learn, and advocate — while introducing new challenges to manage responsibly.

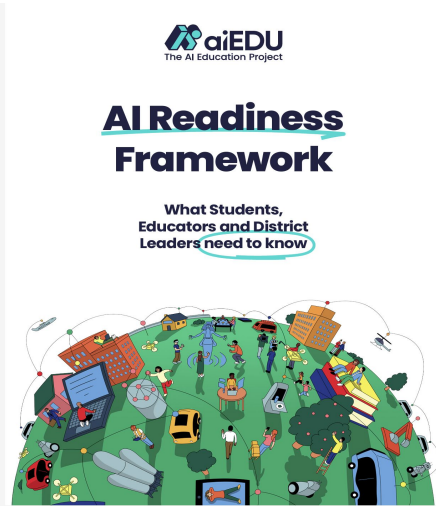




Why AI Readiness:

- AI is shaping every aspect of life — work, learning, and citizenship.
- Students will need *AI literacy* to understand, use, and critique AI tools.
- Educators will need *AI readiness* to guide students with safety, ethics, and creativity.

“Students must build AI literacy and readiness skills that will help them thrive in a constantly evolving future.” — aiEDU (2024)





AI Readiness Framework

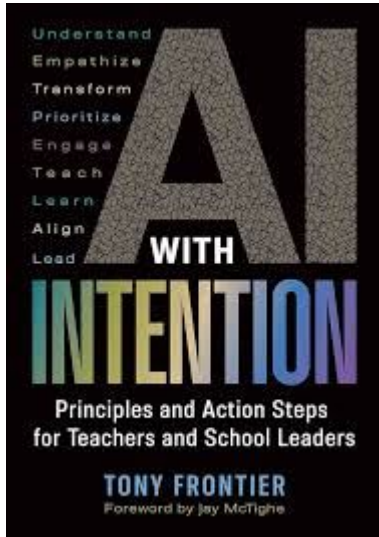
What Students,
Educators and District
Leaders need to know



Key Definitions:

AI Literacy: Understanding, ethically using, and critically evaluating AI in a world where AI is everywhere.

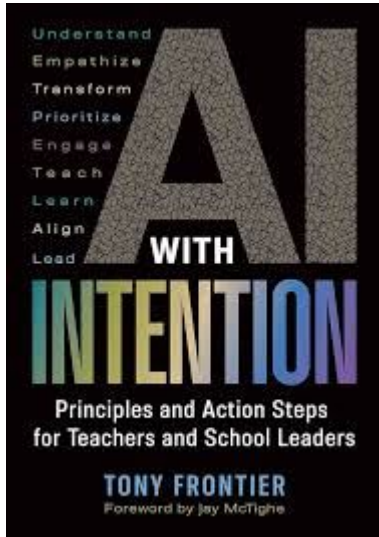
AI Readiness: Applying AI literacy to real contexts — leveraging human skills like creativity, collaboration, and problem-solving alongside AI.



Intentional Teaching and Learning

Intentional learning refers to cognitive processes that have learning as goal rather than an incidental outcome

Intentional teaching refers to the alignment of “success criteria, feedback, learning strategies, teaching methods, activities, and assessments” to support students’ intentional learning.



Using AI with Intention

To use AI with intention means teachers and students apply conscious effort, in specific ways, to AI tools to support intentional teaching and intentional learning.



Chat GPT

explain stoichiometry through the lens of basketball

That's a great idea — using basketball to make stoichiometry more relatable! Here's how you can explain it step-by-step through that lens:

Stoichiometry = Game Strategy and Playmaking

Definition:

Stoichiometry is the process of using balanced chemical equations to determine how much of each substance is needed or produced in a chemical reaction.

In basketball terms, stoichiometry is like figuring out how many **assists**, **passes**, and **shots** you need in order to score a certain number of **points** — based on a *set play* (the balanced equation).

Diffit AI



Diffit AI

Diffit For Teachers

My Resources Create New Resource Library

Student-ready resources for...

Literally Anything Books Text, PDFs, YouTube & Links Vocabulary

What are you teaching? (Gravity, Main Idea...)

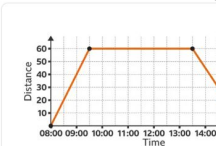
English 5th Grade Align to...

Generate Resources

Youtube Links/PDFs etc.

Multiple Languages, Texts K-11+, Align to Standards including AP

Popular Ready-Made Resources



Search for a title or author



10 Days in a Madhouse
Nellie Bly



1984
George Orwell



20,000 Leagues Under the Sea
Jules Verne



47 Degrees
Justin D'Ath

Support students by giving them a preview text before reading a chapter. If it's not available, they'll create one.

Diffit AI

Resources Automatically Saved

Adjust Grade Level/Language

Martin Luther and Change

English

5th Grade

Reading & Summary

Vocabulary

Multiple Choice Questions

Short Answer Questions

Think Pair Share

Character Traits

+

Multiple Parts Created in Seconds

Reading & Summary

Reading Length

Modify Reading

Change Activity

Name: _____ Date: _____

Martin Luther and the Reformation

A long time ago, in Germany, there lived a man named Martin Luther. He was born in 1483 and became a priest. He also taught about God at a university. Luther was a very smart man who studied the Bible closely. He wanted to help people understand what it really meant.

Luther saw some things happening in the church that he didn't think were right. One thing he didn't like was the selling of indulgences. Indulgences were like special papers that people could buy to get out of punishment for their sins. Luther believed that people should be sorry for their sins in their hearts, not just buy a piece of paper.

In 1517, Luther wrote down 95 ideas, or theses, that he wanted to discuss. He wrote about why he thought selling indulgences was wrong. Some say he nailed these ideas to the door of a church in Wittenberg. This was like putting up a poster for everyone to see. This act is often seen as the start of the Protestant Reformation.

Modify Reading Content

×

Modify Reading Content

☒ **Include more detail**
Add more information about specific topics

☐ **Remove information**
Remove specific content or topics

☐ **Rewrite with vocabulary words**
Add specific vocabulary words to include, separated by commas

☐ **Custom**
Specify your own modification

Update Reading

Vocabulary

Vocabulary

Add Vocabulary

Modify Vocabulary

Change Activity

Vocabulary

Review key vocabulary words from the reading.

priest noun a religious leader in the Christian church. <i>The priest led the service at the church on Sunday.</i>
university noun a school for higher education where students study various subjects. <i>My older sister goes to a university far away from home.</i>
indulgences noun in the past, papers sold by the church that people believed could reduce punishment for sins. <i>Long ago, some people thought they could buy indulgences to get out of trouble for bad things they did.</i>
theses noun statements or ideas written down to start a discussion or argument. <i>The student wrote several theses for his debate.</i>
Wittenberg proper noun a city in Germany where Martin Luther posted his ideas. <i>Martin Luther posted his ideas in Wittenberg.</i>

Modify Vocabulary

Increase complexity

More complex definitions and examples

Decrease complexity

Simpler definitions and examples

Focus on Academic Vocabulary

Use tiered terms found across disciplines

Focus on Content Vocabulary

Use domain-specific terms

Custom

Specify your own vocabulary modification

Update Vocabulary

Add Vocabulary Words

Choose a Source

Add your own words

Enter up to 20 words, separated by commas:

serene, manifest, ponder

Generate

< See All

Popular Vocabulary Activities

Frayer Model: Vocabulary

Instructions: For each vocabulary term, write down a list of characteristics, examples, and non-examples.

Definition	Characteristics
The force that pulls things towards each other.	Gravity
Examples	Non-Examples

Definition

Characteristics

| How much stuff is in something. | Mass |
| Examples | Non-Examples |

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Frayer Model: Vocabulary

Identify characteristics, examples, and non-examples of key terms

Key Vocabulary

Instructions: For each term, write down a sentence that shows you understand its definition. Then create an image to represent the term. Be ready to explain the image.

Vocabulary Term	Show Us A Sentence	An Image to Represent It
serene		
manifest		
ponder		
serene		
manifest		
ponder		
serene		
manifest		
ponder		

Key Vocabulary

Write sentences and create images using key terms

Multiple Choice Questions

Multiple Choice Qu...

⊕ Add Questions ⚙️ Modify Questions 🔄 Change Activity

Name: _____ Date: _____

Multiple Choice Questions

Answer the following multiple choice questions about the reading.

1. What was one thing Martin Luther DID NOT like that was happening in the church? A. Selling indulgences B. Praying to God C. Singing hymns D. Reading the Bible
2. What invention helped spread Luther's ideas quickly? A. The telescope B. The microscope C. The printing press D. The automobile
3. What did Martin Luther do in 1517 that is considered the start of the Protestant Reformation? A. He wrote 95 theses and, according to some accounts, posted them on a church door. B. He began studying the Bible. C. He became a priest. D. He started teaching at a university.

Add Questions

Generate questions based on...

Depth of Knowledge

8th Grade

Comprehension Depth of Knowledge
Depth of Knowledge Level One - Understanding and recalling information or ideas presented. ☐

Simple Reasoning Depth of Knowledge
Depth of Knowledge Level Two - Applying logic to draw conclusions from given facts or situations. ☐

Strategic Thinking Depth of Knowledge
Depth of Knowledge Level Three - Making inferences to solve problems and evaluate information. ☐

Extended Thinking Depth of Knowledge
Depth of Knowledge Level Four - Analyzing and synthesizing information to solve complex problems and create new ideas. ☐

How many questions?

Depth of Knowledge

ELD Standards

WIDA Framework

ELPA21 Standards

Depth of Knowledge

Depth of Knowledge Level Two - Ap...

[See All](#) ✕

Popular Questions Activities

Questions

1. What does gravity do?

A. Gravity pulls things away from each other.
B. Gravity makes things float in the air.
C. Gravity pulls everything together.
D. Gravity only affects things in space.

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Questions

Display multiple choice and short answer questions

Short Answer Questions

Answer the following short answer questions about the reading.

1. Explain what gravity is and give an example of how it affects things on Earth, according to the reading passage.

2. Describe how the sun's gravity affects the planets, including Earth.

3. According to the passage, how do scientists study gravity, and what kind of information can they learn from these studies?

4. Explain what gravity is in your own words.

Short Answer Questions

Display short answer questions

Short Answer Questions

Short Answer Ques...

⊖ Add Questions

⌘ Modify Questions

⚙ Change Activity

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🗑

Name: _____ Date: _____

🧠

Short Answer Questions

Answer the following short answer questions about the reading.

1. Who was Martin Luther, and what did he do for a job?

2. What are indulgences, and why did Luther disagree with them?

3. How did the Protestant Reformation change Christianity, and why was it important?

Modify Questions

☒ Increase complexity

Use more complex language for the questions

☐ Decrease complexity

Use simpler language for the questions

☐ Focus questions on...

Target specific themes or topics

☐ Only include questions about...

Restrict questions to certain content

☐ Don't include questions about...

Exclude specific topics or details

☐ Custom

Specify your own wording modification

Update Questions

< See All

✕

Popular Questions Activities

Questions

1. What does gravity do?

A. Gravity pushes things away from each other.

B. Gravity pulls things away from each other.

C. Gravity pulls everything together.

D. Gravity only affects things in space.

2. What does gravity do?

A. Gravity pushes things away from each other.

B. Gravity pulls things away from each other.

C. Gravity pulls everything together.

D. Gravity only affects things in space.

3. What does gravity do?

4. What does gravity do?

5. What does gravity mean to you?

Questions

Display multiple choice and short answer questions

Multiple Choice Questions

1. According to the passage, what are the two key factors that determine the strength of gravity?

A. Mass and distance

B. Size and shape

C. Speed and velocity

D. Gravity and velocity

2. According to the passage, what role did gravity play in the early universe?

A. It drew together clouds of gas and dust to form stars and galaxies.

B. It caused the expansion of the universe.

C. It created the first living organisms.

D. It prevented the formation of black holes.

3. According to the passage, what is one effect of the moon's gravitational pull on Earth?

A. The rise and fall of ocean tides.

B. The acceleration of Earth's orbit around the sun.

C. The rotation of Earth's axis.

D. The creation of Earth's atmosphere.

4. According to the passage, what prevents us from drifting off into space?

A. Gravity

B. Air pressure

C. Magnetic fields

D. Our weight

5. According to the passage, what is a famous figure in the study of gravity?

A. Isaac Newton

B. Albert Einstein

C. Galileo Galilei

D. Stephen Hawking

6. Which of the following sentences uses the word "mass" in a way that aligns with its meaning in the passage?

A. The truck mass on object has the stronger its gravitational pull.

B. The church service was a mass of people.

C. The chef prepared a large mass of dough for the bread.

D. The author's book is popular to the mass population.

Multiple Choice Questions

Display multiple choice questions

Open Ended Questions