WeTeach_AI

AI Around Us – Exploring Everyday Examples

Grade Level: **6-8** | Duration: **60 minutes** | Subject Area: **Tech Applications**

LESSON TABLE OF CONTENTS

This lesson was designed for the WeTeach_AI **Advancing AI Literacy Project**. The project supports the development of standards-aligned AI literacy lessons written by teachers for teachers. Additional lesson plan material, such as rubrics, answer keys, activity guides, and instructional considerations can be found here on our website.

The contents of this digital lesson were developed by the Texas Advanced Computing Center (TACC) with the support of Google.org. However, the contents do not necessarily represent the policies of Google.

Lesson Author: Rabiaa Ezzedine, CTE and Physics Teacher

"I started teaching in 2003 as a Physics teacher and have had the chance to work in different countries and high schools along the way. About five years ago, I shifted into technology and computer science, and I quickly fell in love with coding and the fast pace of the field. Lately, I've been especially interested in AI; both learning about it myself and helping students see how they can use it in meaningful ways. This lesson is just a first step in that journey."

Lesson Description

In this lesson, students begin by brainstorming examples of artificial intelligence (AI) they encounter in daily life, such as recommendation systems, voice assistants, and smart devices. Using a collaborative mind map, they will organize these examples into categories like apps, games, and home technology. Next, students will participate in an AI/ML sorting activity to clarify the distinction between Artificial Intelligence and Machine Learning (ML). Through discussion and reflection, they will start to understand that AI is the broader concept of machines acting intelligently, while ML is a key method for achieving this through data-driven learning. This lesson sets the foundation for deeper exploration by connecting abstract concepts to familiar experiences.

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Lesson Objectives

(formatted as "Students will be able to..." statements)

- Analyze examples of AI and ML in everyday life to determine their purpose and impact.
- Differentiate between AI and ML by evaluating real-world applications and explaining reasoning.
- Construct a collaborative mind map that categorizes AI technologies based on functionality and context.
- Justify how AI and ML influence decision-making and daily experiences through discussion and reflection.

Essential Questions

1. *How can we evaluate the differences between AI and ML in real-world examples?*
2. *In what ways do AI and ML shape our choices and behaviors?*
3. *How might understanding AI and ML inform how we interact with technology responsibly?*
4. *What criteria can we use to classify technologies as AI, ML, or neither?*

TEKS Alignment (Texas Standards Alignment)

§126.6/126.7/126.8 – Technology Applications

- **(b)(2)(A)** Students break down the problem-solving process into four steps: decomposition, pattern recognition, abstraction, and algorithms.
- **(b)(2)(E)** Students build their knowledge of software applications and hardware focusing on keyboarding and use of applications and tools. Students also build their knowledge and use of technology systems, including integrating the use of multiple applications.

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CSTA/ISTE Alignment (National Standards Alignment)	
CSTA **1B-IC-20:** Seek diverse perspectives for improving computational artifacts. **3A-IC-25:** Test and refine computational artifacts to reduce bias and equity deficits.	**ISTE** **1.3:** Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others. **1.4:** Students use a variety of technologies within a design process to identify and solve problems by creating new, useful, or imaginative solutions. **1.5:** Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Effective Pedagogical Strategies

The instructor provides opportunities for students to include themselves in their learning, activities, and/or projects.	The instructor incorporates students' prior knowledge into the lesson and/or material not previously covered.	Activities that prioritize student questioning and discussion prompts with an emphasis on questions that promote higher order thinking skills (e.g., apply, analyze, evaluate) are selected.	Presentation of content promotes inquiry and the development of communication skills.	Curricular content is collaborative and fully engaging for all team members, allowing for full expression.

AI Literacy Competences

(based on TeachAI Framework)

Creating with AI: 5. Explain how AI systems perform tasks using precise language that avoids anthropomorphism.	**Designing with AI: 5.** Describe an AI model's purpose, intended users, and its limitations.

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Key Terms	
Term	**Definition**
Algorithm	A step-by-step set of instructions to solve a problem or complete a task.
Artificial Intelligence (AI)	Technology that allows computers to learn from data, recognize patterns, and make decisions or generate content based on that information.
Data	Information that a computer can collect, use, or analyze. Data can include numbers, words, images, sounds, or any measurable input.
Machine Learning (ML)	A subset of AI that enables computers to learn from data rather than being explicitly programmed with rules.
Pattern Recognition	The ability of a computer to identify similarities or trends in data to make decisions or predictions.

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Launch

Engaging activity or prompt to introduce the lesson. **Estimated time: 20 minutes**

Objective: To activate prior knowledge and spark curiosity by helping students recognize AI and ML in their daily lives, while introducing the distinction between the two concepts.

Materials:

- Device Access: Laptops/tablets for students
- Digital Tool: MindMeister (or similar mind-mapping tool)
- Google Slides: AI vs ML Sort activity (link includes answer key)
- Sticky Notes or Digital Board: For quick reflections
- Projector/Screen: To display collaborative mind map

Teacher Instructions	Sample Teacher Remarks
Set Up Mind Map (3 min) Create a central node titled "AI Around Me". Add branches for categories: - Phone - Apps - Games - Home Devices - School - Social Media Student Participation (5 min) Invite students to add examples as sub-nodes under branches. This is an example created on MindMeister. - Examples: Netflix → Recommendation Engine (ML), Siri → Voice Assistant (AI + ML), TikTok → Feed Suggestions (ML) Prompt for Discussion (4 min) Ask: - *Which of these examples are AI? Which are AI/ML?* - *How do these tools make our daily life easier or harder?* (Answer Key): - AI Examples: Siri, Alexa, Chatbots (because	*"We're going to create a mind map called 'AI Around Me.' Think about the apps, devices, and tools you use every day. Where do you see technology acting smart—like making decisions or giving recommendations?"* ***(Pause for student responses. Then, prompt for examples.)*** *"Add examples under categories like Phone, Apps, Games, Home Devices, School, Social Media. For instance, Netflix uses machine learning to recommend shows, and Siri uses AI to understand your voice."* ***(Pause for students to add examples and to describe whether the tools make their lives easier or harder.)*** *"This activity helps us see how AI is already part of our lives and sets the stage for understanding what AI and ML really mean."* ***(Transition to think, pair, share)*** *"Look at each example and decide: Is it AI, AI and ML, or Not Sure? Write down your reasoning. Why do you think that?"*

they interpret language and respond intelligently). - ML Examples: Netflix recommendations, TikTok feed, YouTube suggestions (because they learn from user data). - Not AI/ML: Calculator, basic alarm clock (rule-based, no learning). Transition to Sorting Activity (8 min) Share the Google Slides, provided in the lesson resources, for AI vs ML Sort. Students do Think (2 min) → Pair (3 min) → Share (3 min). As a class, move pictures into columns collaboratively.	***(Pause for student independent thinking)*** *"Compare your answers with your partner. If you disagree, explain your reasoning. You can change your mind if their explanation makes sense."* ***(Pause for student pair sharing, and transition to whole group discussion)*** *"Let's move these examples into the correct columns together. Notice where we had disagreements—those are great opportunities to clarify the difference between AI and ML. Today, we are exploring how AI is the big idea—making machines act smart. ML is one way to achieve that by learning from data."*

Additional Discussion Prompts	Anticipated Student Outcomes
- Why do you think some examples fit under AI but not ML? - Which AI or ML examples have you interacted with today without realizing it? - Could using AI in these cases ever cause problems or unfair outcomes?	- Students identify and classify examples of AI and ML from their own experiences. - Students collaborate to create a mind map that organizes examples into meaningful categories. - Students justify reasoning during the sort activity, using evidence from prior knowledge and discussion. - Students begin to differentiate AI from ML conceptually and recognize their impact on daily life.

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Exploration

Step-by-step student tasks, experiments, or investigations. **Estimated time: 25 minutes**

Objective: Deepen understanding of AI vs ML through multimedia and reasoning.

Materials:

- Access to curated video: AI vs ML Explained (from lesson resource list)
- Google Slides: AI vs ML Sort activity (link includes answer key)

Teacher Instructions	Sample Teacher Remarks
Video: AI vs ML Explained (5 minutes) Play this short video to clearly distinguish AI from ML: The Difference Between Artificial Intelligence an... Extended Sort Activity (15 min) Students revisit the sorting activity, from this lesson's Launch, after the video. Ask students to refine their reasoning and add at least one new example from their own life. Quick Reflection (5 min) Encourage students to either write or share aloud their responses to the following prompt: - "One thing I learned about AI vs ML today..."	*"Notice how AI is the big idea—making machines act smart—and ML is one way to achieve that by learning from data. Let's watch a quick video to explore this further."* ***(Play video clip)*** *"Let's go back to your original sort. Did the video change your thinking? Update your classifications and reasoning. Also, add at least one new example from your life—something you use every day that might involve AI or ML. Be ready to explain why you placed it where you did."* ***(Transition to extended sorting activity and student share-outs about their updates to the sorting)*** *"Take a moment to write down one key insight from today's activity. This will help us connect to tomorrow's lesson."*

Anticipated Student Outcomes

- Students refine their understanding of AI vs ML using multimedia and reasoning.
- Students apply vocabulary to real-world examples.
- Students generate new examples from personal experience.
- Students prepare for ethical and historical connections in Lesson 2.

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Whole Class Discussion

Discussion questions, teacher prompts, and expected student responses. **Estimated time: 10 minutes**

Objective: Encourage higher-order thinking and ethical reflection on the impacts of AI and ML

Materials:

- Projector or Smartboard
- Student-created examples from the sort activity
- Vocabulary handout or visual reference
- Optional: Sticky notes for quick feedback

Review with the class the formal definitions of this lesson's key vocabulary. Facilitate discussion with the class surrounding the day's activities.

Sample Teacher Remarks
"Now that you've refined your classifications, let's reflect as a class. Think about how your reasoning changed after the video and sorting activity. Use the vocabulary terms—AI, ML, algorithm, data—to explain your ideas... There are no wrong answers here; we're exploring how these technologies impact our lives."

Sample Discussion Questions	Sample Student Responses
1. Why do you think some examples fit under AI but not ML?	*"AI is broader—it includes things like voice assistants that interpret language, even if they don't learn from data."*
2. Which AI or ML examples have you interacted with today without realizing it?	*"My music app suggested songs based on what I listened to earlier—that's ML."*
3. Could using AI in these cases ever cause problems or unfair outcomes?	*"If the data is biased, recommendations could reinforce stereotypes or limit choices."*
4. If AI makes decisions for us, how does that affect our independence?	*"It might make life easier, but we could start relying too much on technology instead of thinking for ourselves."*
5. What responsibilities do companies have when they use AI in everyday tools?	*"They should make sure the AI is fair and explain how it works so people can trust it."*

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Assessment

Formative or summative assessment tasks and criteria. **Estimated time: 5 minutes**

Objective: Students will demonstrate understanding of the difference between AI and ML by clearly distinguishing them, giving real-world examples, and reflecting on related ethical implications.

Materials:

- Assessment prompts (displayed on board, slide, or printed handout)
- Google Form (or other digital tool for collecting responses) or sticky notes/loose-leaf paper for written responses
- Optional: Projector or Smartboard (for modeling a sample responses or sentence stems)

Assessment Opportunities	Facilitation Tips
Exit Ticket (5 minutes) Provide students with the following exit ticket prompts: - *"Explain one difference between AI and ML in your own words."* - *"Give one example of AI and one of ML from your life.* Use sticky notes, a shared digital board, or your LMS (Google Classroom, Canvas) for quick submission. If assigning outside of class, post clear submission guidelines. ☑ Use the rubric provided in this lesson's resources to assess student submissions.	Clarify expectations: *"Your answer should use the vocabulary we learned today—AI, ML, algorithm, data—and include reasoning for your examples."* Offer sentence starters for students who need scaffolds: - "One difference between AI and ML is..." - "An example of AI I use is... because..." - "An example of ML I use is... because..." Circulate and check for understanding. Ask probing questions: - *"What makes this example AI instead of ML?"* - *"How does your example show learning from data?"* Encourage evidence-based responses: *"Use examples from your mind map or sorting activity to support your answer."* Provide formative feedback; highlight strong examples anonymously to guide peers in future lessons. Note misconceptions for review in the next lesson.