

Tracing AI's Journey – From Turing to Today

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

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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.

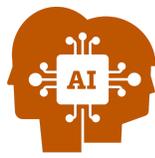
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Lesson Author: Rabiaa Ezzedine, CTE and Physics Teacher

“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 will investigate the historical development of AI, tracing its evolution from early ideas like the Turing Test to modern breakthroughs in deep learning. Working individually or in pairs, they will research key milestones and create a visual timeline using tools like Google Slides or Canva. Each timeline will include event names, dates, and short explanations of why these moments were significant. Students will then share their timelines with peers, highlighting connections between historical innovations and current AI applications. This activity helps students see AI as a field shaped by decades of progress and prepares them to think critically about its future.



Lesson Objectives

(formatted as “Students will be able to...” statements)

- Analyze historical milestones in AI to determine their significance.
- Compare and contrast early AI approaches with modern ML techniques.
- Construct a visual timeline that synthesizes research into a coherent narrative.
- Evaluate how technological advances influenced AI’s role in society.

Essential Questions

1. *How did AI evolve from early concepts to today’s applications?*
2. *What breakthroughs made Machine Learning central to AI?*
3. *How can understanding AI’s history help us predict future trends?*
4. *Which historical events had the greatest impact on ethical considerations in AI?*

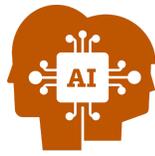
TEKS Alignment (Texas Standards Alignment)

§110.22/110.23/110.24 – English Language Arts and Reading

- **(b)(8)(D)** Analyze characteristics and structural elements of informational text.
- **(b)(12)(C)** Refine the major research question, if necessary, guided by the answers to a secondary set of questions.

§112.26/112.27/112.28 – Science

- **(b)(2)(B)** Analyze data by identifying any significant descriptive statistical features, patterns, sources of error, or limitations.
- **(b)(3)(A)** Develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories.



CSTA/ISTE Alignment (National Standards Alignment)

<u>CSTA</u>	<u>ISTE</u>
1B-DA-06: Organize and present collected data visually to highlight relationships and support a claim.	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.

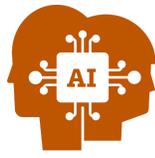
Effective Pedagogical Strategies

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.
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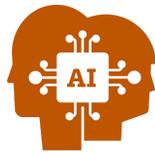
AI Literacy Competences

(based on TeachAI Framework)

Designing with AI: 5. Describe an AI model's purpose, intended users, and its limitations.	Engaging with AI: 7. Connect AI's social and ethical impacts to its technical capabilities and limitations.
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Key Terms	
Term	Definition
Model	In machine learning, it is the “brain” created by a computer to make predictions or decisions based on data.
Prediction	The output or answer a machine learning model provides after analyzing data.
Reinforcement Learning	A type of machine learning where the model learns by trial and error, receiving feedback or rewards for its actions.
Supervised Learning	A type of machine learning where the model learns from labeled examples (inputs paired with the correct answers).
Training	The process of teaching a machine learning model by showing it many examples so it can learn patterns.
Unsupervised Learning	A type of machine learning where the model looks for patterns in data without being told the “right answer.”



Launch

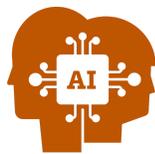
Engaging activity or prompt to introduce the lesson. **Estimated time: 10 minutes**

Objective: Connect prior knowledge from the previous lesson to the historical development of AI.

Materials:

- Projector or Smartboard for displaying visual aids
- Visual Aid: AI Milestones infographic, slide deck, or timeline (a sample is provided in lesson resources)

Teacher Instructions	Sample Teacher Remarks
<p>Display and describe 2–3 iconic AI milestones (e.g., Turing Test, Dartmouth Conference, Deep Blue, ChatGPT).</p> <ul style="list-style-type: none"> - Use the infographic (such as the sample provided in the lesson resources) or slides to briefly explain each event. <p>Ask reflection questions to activate curiosity:</p> <ul style="list-style-type: none"> - “What patterns do you notice in these milestones?” - “How do these breakthroughs connect to the AI tools we use now?” <hr/> <p>Sample Student Responses</p> <ul style="list-style-type: none"> - “They all represent breakthroughs that made AI smarter or more capable.” - “They matter because they show how AI moved from theory to real-world applications.” - “ChatGPT shows how far we’ve come because now AI can understand and respond in natural language, not just follow rules.” - “These milestones matter because they changed what people believed was possible with technology.” 	<p>“Yesterday we explored AI and ML in our daily lives. Today, we’ll see how these technologies evolved over time and what shaped the AI we use today.”</p> <p>(Display AI milestones and describe the events to the class)</p> <p>“This first milestone, the Turing Test, was created in 1950 to measure whether a machine could ‘think.’</p> <p>The Dartmouth Conference in 1956 marked the birth of AI as a field. Deep Blue beating a chess champion in 1997 showed how powerful algorithms could become.</p> <p>Today, tools like ChatGPT represent another leap forward—machines can now generate text that feels human-like. What do these events have in common? Why might they matter for AI today?”</p> <p>(Pause for student responses)</p> <p>“You’re about to create your own timeline of AI milestones. As you research, think about how each event changed what AI could do and how it connects to the tools we use now.”</p>



Exploration

Step-by-step student tasks, experiments, or investigations. **Estimated time: 30 minutes**

Objective: Research and create a visual timeline of AI milestones.

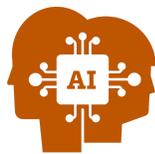
Materials:

- Curated Video: AI History and Major Breakthroughs (from lesson resource list)
- Google Slides, Jamboard, or Canva for timeline creation
- Laptops or tablets for student research
- Links to AI history articles (Maryville University, Our World in Data)
- Vocabulary handout or visual reference

Teacher Instructions	Sample Teacher Remarks
<p><u>Video: A Brief History of AI (6 minutes)</u> Play this video introducing AI's evolution and major milestones:  A Brief History of AI</p> <p><u>Timeline Research & Creation (18 min)</u> Students work individually or in pairs to research key events (Turing Test, Dartmouth Conference, Deep Blue, modern ML breakthroughs). Sample research resources are provided in the lesson's resources.</p> <p>Use Google Slides, Jamboard, or Canva to design a timeline with:</p> <ul style="list-style-type: none">- Year- Event name- Brief explanation- Optional image/icon <p><u>Gallery Preview (6 min)</u> Students engage in a quick share of timelines in small groups.</p>	<p><i>"Let's explore AI's evolution and major breakthroughs via a short video clip. As you watch, notice how ideas from decades ago still influence today's AI. Pay attention to events that changed what AI could do."</i></p> <p>(Play video clip)</p> <p><i>"Let's focus on why each event matters—how did it change what AI could do? Let's work on building an AI history timeline. Timelines should visualize events in AI's history by name and year. Include a brief explanation of the event. Use today's vocabulary in your explanations."</i></p> <p>(Transition to gallery preview)</p> <p><i>"Take a minute to look at your peers' timelines. What patterns do you notice in AI's evolution? Which events stand out as turning points?"</i></p>

Anticipated Student Outcomes

- Students analyze historical milestones and explain their significance.
- Students apply vocabulary (model, prediction, training) in context.
- Students create a visual timeline that demonstrates understanding of AI's evolution.



Whole Class Discussion

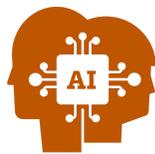
Discussion questions, teacher prompts, and expected student responses. **Estimated time: 10 minutes**

Objective: Connect historical milestones to modern AI applications and encourage forward-thinking predictions.

Materials:

- Student-created timelines
- Projector or Smartboard
- Vocabulary handout or visual reference
- Optional: Sticky notes for quick feedback

Teacher Instructions	Sample Teacher Remarks
<p>Display a few student timelines and highlight major milestones (e.g., Turing Test, Dartmouth Conference, Deep Blue, modern ML breakthroughs).</p> <p>Review formal definitions of Lesson 2 vocabulary:</p> <ul style="list-style-type: none">- Model- Prediction- Supervised Learning- Reinforcement Learning- Training- Unsupervised Learning <p>Facilitate discussion using the prompts below to encourage analysis and synthesis.</p> <p>Encourage students to use vocabulary terms in their responses.</p>	<p><i>“Now that you’ve researched and created timelines, let’s reflect as a class. Think about how your understanding of AI changed after exploring its history.</i></p> <p><i>Use today’s vocabulary—model, prediction, training, reinforcement learning, supervised and unsupervised learning—to explain your ideas. There are no wrong answers here; we’re connecting past milestones to today’s technology and imagining what’s next.”</i></p>



Sample Discussion Questions	Sample Student Responses
1. Which event surprised you the most?	<i>"I didn't realize the Turing Test was created so long ago—it shaped how we think about machine intelligence."</i>
2. How did ML become such an important part of AI over time?	<i>"ML became essential because it allows systems to learn from data instead of relying only on rules."</i>
3. What patterns do you notice in AI's evolution?	<i>"AI milestones often follow breakthroughs in computing power and data availability."</i>
4. If you could predict the next big AI milestone, what would it be?	<i>"AI that can reason like humans or explain its decisions clearly might be the next big step."</i>
5. How does understanding AI's history help us prepare for its future?	<i>"It shows that progress depends on data and computing power, so we need to think about ethics and resources as AI grows."</i>

Assessment

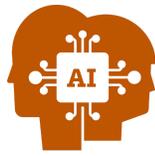
Formative or summative assessment tasks and criteria. **Estimated time: 10 minutes**

Objective: Students will demonstrate their understanding of AI's historical evolution by identifying a key milestone, explaining its significance, and connecting it to modern AI applications or future 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 (10 minutes) Provide students with the following exit ticket prompts:	Clarify expectations: <i>"Your answer should use at least one vocabulary term from today's lesson—such as model, prediction, training, supervised learning, or</i>



- “Name one historical event that shaped AI and explain why it matters.”
- “How does understanding AI’s history help us think about its future?”

Providing the following submission options is recommended:

- Written paragraphs (Google Docs, LMS, or sticky notes).
- Audio or video response for students who prefer verbal expression.

Encourage evidence-based responses: “Use examples from your timeline or the video to support your answer.”

Use the rubric provided in this lesson’s resources to concurrently assess student timeline and exit ticket submissions.

unsupervised learning—and include reasoning for why the historical event you chose is significant.”

Offer sentence starters for students who need scaffolds:

- “One important milestone in AI history is...”
- “This event matters because...”
- “Understanding this helps us predict future AI developments because...”

Circulate and check for understanding. Ask probing questions:

- “Why do you think this event changed what AI could do?”
- “How does this connect to the AI tools we use today?”

Highlight strong examples anonymously to model quality responses. Note misconceptions (e.g., confusing AI with ML) for review in the next lesson.