



PK-8 AI Literacy Scope and Sequence

Foundational Awareness (Grades: PK-2)

BIG Concepts: Human vs. Machine intelligence, Physical vs. Digital AI.

- **What is AI?**
 - **Concept:** Identify AI in everyday life (e.g., Siri/Alexa, Netflix recommendations).
 - **Activity:** "Is it AI?" sorting game. Compare a toaster (follows rules) to a smart speaker (predicts intent).
- **The Brain Comparison:**
 - **Concept:** Humans learn through senses and feelings; AI learns through counting and sorting data.
 - **Activity:** "How do you know it's a cat?" Students describe how they "know" (it's soft, it purrs). Explain that AI "knows" by looking at thousands of pixel patterns.
- **AI in the Physical World:**
 - **Concept:** AI isn't just a screen; it powers robots, self-driving cars, and smart vacuums.
 - **Activity:** "Design a Helpful Robot." Students draw a robot to solve a classroom problem (e.g., picking up crayons) and discuss what "sensors" it would need to see the crayons.

The Power of Data (Grades: 3-5)

BIG Concepts: Recommendation Engines, Dataset Diversity, and Privacy.

- **The "Filter Bubble" Awareness:**
 - **Concept:** Algorithms try to predict what you like, which can sometimes stop you from seeing new things.
 - **Activity:** "The Personal Newsfeed." Students act as "recommendation engines" for a classmate, realizing that only recommending "Dog videos" means their friend never sees "Space videos."
- **Data Privacy & Safety:**
 - **Concept:** AI needs "fuel" (data), but some fuel is private.
 - **Activity:** Sorting personal vs. public data. Discuss why we shouldn't give an AI chatbot our home address or full name.
- **The "Human-in-the-Loop":**
 - **Concept:** AI is a tool that requires human supervision to be effective.
 - **Activity:** "AI Weather Reporter." Use an AI to generate a weather forecast, then have students edit it to make it sound more natural and check it against a local radar.

Critical Evaluation and Agency (Grades: 6-8)

BIG Concepts: Ethics, Bias, Neural Networks, Intellectual Property, and AI Economics

- **6th Grade: AI Ethics & Integrity**
 - **Concept:** Academic Integrity and Boundaries. Students differentiate between AI as a "tutor" (brainstorming, explaining concepts) versus AI as a "ghostwriter" (completing work for the student), and the importance of disclosure.
 - **Activity: The Usage Scenario Sorting Game.** Students analyze real-world classroom scenarios (e.g., "Using AI to generate a thesis statement" vs. "Using AI to explain a complex science



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concept") and categorize them as Acceptable, Requires Citation, or Prohibited based on district guidelines.

- **7th Grade: Algorithmic Bias**

- **Concept:** Dataset Representation and "Invisibilized" Perspectives. AI is not objective; it is a reflection of the data it was fed. If historical or cultural data is incomplete or biased, the AI's output will perpetuate those same flaws.
- **Activity:** The "Training Day" Simulation. Students examine specific AI-generated images or text snippets for stereotypes or omissions. They then "audit" a hypothetical dataset to identify who is missing (e.g., specific ethnicities, age groups, or regions) and discuss how that absence changes the tool's reliability.

- **8th Grade: AI in the Research Ecosystem**

- **Concept: The "Hallucination" Factor vs. Peer-Reviewed Authority.** Large Language Models (LLMs) are predictive engines, not search engines. They lack the "ground truth" and citation traceability found in academic databases like ProQuest.
- **Activity:** During their humanities research project, we explore the limitations of AI as a research tool, compare it to databases like ProQuest, and discuss where AI might fit productively into the research process.

- **Demystifying the "Black Box" (Neural Networks):**

- **Concept:** Introductory understanding of how layers of nodes process information (inputs → weights → outputs).
- **Activity:** "Human Neural Network." Students stand in rows; each row is a layer that filters information (e.g., "Is the shape blue?" "Is it a circle?") to identify an object.

- **Intellectual Property & The "Creative" Debate:**

- **Concept:** Who owns an AI-generated image? The person who typed the prompt, the AI company, or the artists whose work trained the AI?
- **Activity:** Socratic Seminar based on current legal cases (e.g., artists suing AI companies). Use **TeachAI's** ethics frameworks to debate "Fair Use."

- **AI and the Future of Work:**

- **Concept:** AI won't replace all jobs, but it will change how almost every job is done.
- **Activity:** "Career Remix." Research a career (e.g., Architect, Nurse, Chef) and brainstorm one way AI helps that professional and one task that *must* remain human-led.

- **Advanced Prompt Engineering (The "Iterative Loop"):**

- **Concept:** Moving beyond one-shot prompts to "Chain of Thought" prompting.
- **Activity:** "The Multi-Step Challenge." Students must get an AI to write a 3-act play by prompting it one scene at a time, providing feedback and corrections at every stage.

Resources

[Common Sense: AI Literacy Lessons, Grade 6-12](#)

[Common Sense: Media Literacy Lessons](#)

[TeachAI: AI Literacy](#)

[Studio CODE: AI for Oceans \(How AI Works?\)](#)