FOUNDATIONS

AI LITERACY IN OUT OF SCHOOL TIME (OST)

Empowering youth to understand, use, and navigate AI—today's skills for tomorrow's world.

Artificial Intelligence is becoming a normal part of our daily lives, and we often interact with it without realizing its presence or understanding its impacts. This curated collection of resources is designed for out-of-school-time (OST) educators, offering tools and activities to help youth develop their AI literacy skills. By engaging with these resources, young people will be better prepared for a future where their ability to understand and use AI will influence both their careers and personal lives.

Code.org's AI Curricula for Elementary and Middle School
Title of resource: Code.org Computer Science Curriculum & AI Learning Resources
Organization name: Code.org
Organization type (for-profit, nonprofit, school, etc.): Nonprofit
Learning environment for resource (classroom, after school, other): Classroom, after school, and informal learning environments
Link to the resource: https://code.org; Code.org's AI Curricula for Elementary and Middle School
Subject area: Computer Science, Technology, STEM, Digital Literacy
Grade levels: K–12 (with differentiated pathways for elementary, middle, and high school students)
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use):

- Foundational Understanding (understanding digital systems, media, and online environments)
- Ethical/societal implications (focus on privacy, digital identity, cyberbullying, misinformation, and responsible technology use)
- AI tool use (in select modules, especially newer AI-focused lessons)

Common Sense Media's Digital Literacy and Wellbeing Curriculum
Title of resource: Common Sense Media Digital Literacy & Well-Being Curriculum
Organization name: Common Sense Media
Organization type (for-profit, nonprofit, school, etc.): Nonprofit
Learning environment for resource (classroom, after school, other): Primarily classroom, but also adaptable for after-school programs and home use
Link to the resource: https://www.commonsense.org/education/digital-citizenship
Subject area: Digital Literacy, Digital Citizenship, Media Literacy, Social-Emotional Learning
Grade levels: K–12 (with newer curriculum versions emphasizing K–8 and expanding to high school)
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use):

- Foundational Understanding (understanding digital systems, media, and online environments)
- Ethical/societal implications (focus on privacy, digital identity, cyberbullying, misinformation, and responsible technology use)

- Emerging AI literacy topics (e.g., deepfakes, media manipulation, and responsible tech use)

If the resource requires students to use an AI-powered product: No, the curriculum does not require students to use AI-powered tools. It focuses more on understanding and evaluating digital environments, though some newer lessons address AI-related concepts.

Technovation Girls Curriculum

Title of resource: Technovation Girls Curriculum
Organization name: Technovation
Organization type (for-profit, nonprofit, school, etc.): Nonprofit
Learning environment for resource (classroom, after school, other): After-school programs, classrooms, clubs, and informal/global competition-based learning environments
Link to the resource: https://technovationchallenge.org/curriculum
Subject area: Computer Science, Artificial Intelligence, Entrepreneurship, STEM, Digital Innovation
Grade levels: Ages 8–18 (approximately grades 3–12; beginner, junior, and senior divisions)
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use):

- Foundational Understanding (students learn what AI is, how it works, and how to build AI-enabled solutions)
- Ethical/societal implications (strong emphasis on ethics, community impact, and responsible AI use)
- AI tool use (students may build or integrate AI into apps and use AI tools during development)

If the resource requires students to use an AI-powered product: Students may choose to build AI-powered features or use generative AI tools as part of their app development process, but it is not strictly required.

Understanding AI Literacy

Title of resource: Understanding AI Literacy
Organization name: Stanford University (Teaching Commons)
Organization type (for-profit, nonprofit, school, etc.): Higher education institution (nonprofit university)
Learning environment for resource (classroom, after school, other): Primarily higher education (faculty/professional learning), but adaptable for classroom and professional development contexts
Link to the resource: https://teachingcommons.stanford.edu/teaching-guides/artificial-intelligence-teaching-guide/understanding-ai-literacy
Subject area: Artificial Intelligence, Digital Literacy, Higher Education Pedagogy
Grade levels: Primarily educator-focused (higher education instructors and teaching teams), but concepts are transferable to secondary (grades 6–12) and postsecondary learning environments
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use):

- Foundational Understanding (how AI systems work, terminology, capabilities, and limitations)

- Ethical/societal implications (bias, fairness, human-centered use, and responsible decision-making)
- AI tool use (guidance on using AI in teaching, prompting, and integrating tools into learning)

This resource is especially strong because it organizes AI literacy into four domains:

- Functional literacy (how AI works)
- Ethical literacy (responsible and fair use)
- Rhetorical literacy (how to effectively use and interpret AI-generated content)
- Pedagogical literacy (how to integrate AI into teaching and learning)

If the resource requires students to use an AI-powered product: No, it does not require students to use AI tools; however, it encourages thoughtful and intentional use of generative AI tools in educational contexts.

AI Unplugged

Title of resource: AI Unplugged: Unplugging Artificial Intelligence (Activities & Teaching Materials)
Organization name: Northwestern University
Organization type (for-profit, nonprofit, school, etc.): Nonprofit higher education institution
Learning environment for resource (classroom, after school, other): Classroom, after-school programs, workshops, and informal learning environments
Link to the resource: https://sites.northwestern.edu/aiunplugged/
Subject area: Artificial Intelligence, Computer Science, Computational Thinking
Grade levels: Upper elementary through higher education (adaptable; commonly used in middle school, high school, and introductory college settings)
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use):

- Foundational Understanding: core AI concepts such as algorithms, decision-making, and learning processes are taught through hands-on, physical activities
- Ethical/societal implications: some activities prompt discussion of how AI systems make decisions and their limitations
- Limited AI tool use: focus is on conceptual understanding rather than using actual AI systems

If the resource requires students to use an AI-powered product: No, the resource does **not** require students to use AI-powered tools. It is intentionally designed to teach AI concepts without technology, making it highly accessible in low-tech or no-tech environments.

AI Literacy Learning Scenarios

Title of resource: AI Literacy Learning Scenarios for Primary and Secondary Students (Learning Scenarios Deck)
Organization name: TeachAI
Organization type (for-profit, nonprofit, school, etc.): Nonprofit, multi-organization initiative focused on AI literacy in education (led by global nonprofit organizations at the intersection of education, workforce, and technology)

Learning environment for resource (classroom, after school, other): Designed for classroom instruction and educator-facilitated learning; also suitable for professional development sessions, after-school programs, and curriculum planning contexts.
Link to the resource: AI Literacy Learning Scenarios
Subject area: Artificial Intelligence literacy integrated across subject areas, including computer science, social studies, humanities, STEM, and interdisciplinary learning contexts.
Grade levels: Primary and secondary education, approximately Grades K–12, with scenarios adaptable across elementary, middle, and high school grade bands. This resource has short AI-generated videos and ready-to-use activity ideas for 6-12 graders that fit into a 40-minute activity block and cover a variety of subjects with no prep-required.
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use) The resource emphasizes foundational understanding of AI concepts and strong attention to ethical and societal implications of AI use. Scenarios are designed to help learners understand how AI works, evaluate its impacts, and make informed, responsible decisions about its role in learning and society.
If the resource requires students to use an AI-powered product: No, use of an AI-powered product is not required. The deck provides learning scenarios, discussion prompts, and optional tool suggestions; educators may choose whether to incorporate AI tools based on context, safety, and accessibility considerations.

Google x 4-H Artificial Intelligence Curriculum
Title of resource: Google x 4-H Artificial Intelligence Curriculum (CLOVER Activity)
Organization name: National 4-H Council (in partnership with Google.org and multiple land-grant universities)
Organization type (for-profit, nonprofit, school, etc.): Nonprofit youth development organization operating through the Cooperative Extension System
Learning environment for resource (classroom, after school, other): Primarily designed for after-school, out-of-school time (OST), and 4-H club settings; also adaptable for classroom or independent learning with facilitation
Link to the resource: Google x 4-H Artificial Intelligence Curriculum
Subject area: Artificial Intelligence, Computer Science, STEM, Agriculture and Agriscience (applied context)
Grade levels: Upper elementary through middle school, with most activities aligned to approximately Grades 3–8 (ages 8–14). There are six interactive activities for grades 5-12 developed by Google and 4-H that focus on improving AI systems that mirror real ag-tech innovations that demonstrate how AI is shaping the future of food, sustainability, and technology.
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use) Primarily supports foundational understanding of AI, including how machines learn, recognize patterns, and make decisions, with applied examples in agriculture and sustainability. Some activities also introduce basic AI tool interaction in a guided, educational context.
If the resource requires students to use an AI-powered product: Yes, in a guided and age-appropriate way. Students interact with simulated or real AI-powered systems (such as

pattern recognition and training activities) as part of structured learning experiences. Direct technical AI development is not required.

Day of AI Lessons

Title of resource: Day of AI – Curriculum Resources
Organization name: Day of AI
Organization type (for-profit, nonprofit, school, etc.): Nonprofit organization and academic initiative. Day of AI is a nonprofit educational program developed in partnership with MIT RAISE (Responsible AI for Social Empowerment and Education) and other nonprofit and public-sector partners
Learning environment for resource (classroom, after school, other): Designed for Classroom After-school / Out-of-School Time (OST), Schoolwide and districtwide implementation, home or independent or facilitated learning (with facilitation)
Link to the resource: Day of AI Lessons
Subject area: Artificial Intelligence, Computer Science, Data Science, Digital & Media Literacy Ethics and Civics, STEM / STEAM (interdisciplinary)
Grade levels: K–12, with age-banded and developmentally appropriate curricula for ages 5–7, ages 8–10, ages 11–13 and ages 14–18
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use) Day of AI provides lessons to bring AI literacy to education programs with free, ready-to-teach units and educator resources. The Day of AI curriculum intentionally addresses all three major strands of AI literacy, with particular emphasis on foundational understanding and responsible use:

- Foundational Understanding - Students learn what AI is, how algorithms and machine learning work, and how data influences AI systems
- Ethical / Societal Implications - Lessons explore bias, fairness, privacy, transparency, workforce impacts, and responsible AI decision-making
- AI Tool Use (Guided and Responsible) - In some lessons, students critically examine or experiment with AI tools in structured, age-appropriate ways focused on understanding, not skill mastery

If the resource requires students to use an AI-powered product: No, AI-powered tools are optional, not required.

Airbus Foundations' OST Activities

Title of resource: Airbus Foundation Discovery Space – Discover
Organization name: Airbus Foundation
Organization type (for-profit, nonprofit, school, etc.): Nonprofit foundation (corporate foundation of Airbus focused on youth development and education)
Learning environment for resource (classroom, after school, other): Designed for Classroom, After-school / Out-of-School Time (OST), Independent or facilitated learning (home, museum, community programs)
Link to the resource: Airbus Foundations' OST Activities
Subject area: Artificial Intelligence, Science, Technology, Engineering, Arts, and Mathematics (STEAM), Aerospace and Space Science, Digital Literacy, Ethics and Society

Grade levels: Ages 8–18, typically aligned to: Upper Elementary (Grades 3–5), Middle School (Grades 6–8), High School (Grades 9–12). Content is organized into age bands (Discover, Experiment, Inspire) to ensure developmental appropriateness
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use): The Discovery Space platform supports multiple AI literacy strands, including:

- Foundational Understanding - Learners explore what AI is, how it works, and how it is applied in real-world contexts such as aerospace, transportation, and exploration
- Ethical/Societal Implications - Interactive experiences such as *Fair Enough* guide learners through ethical issues related to AI, including bias, jobs, deepfakes, privacy, and human–AI decision-making
- AI Tool Use (Conceptual, Not Technical) - Students examine how AI tools are used in industry and society, not required to build or deploy AI models

If the resource requires students to use an AI-powered product: No, not required.

The Tech Interactive
Title of resource: Artificial Intelligence: Lessons & Activities
Organization name: The Tech Interactive
Organization type (for-profit, nonprofit, school, etc.): Nonprofit science and technology museum and education organization
Learning environment for resource (classroom, after school, other): Designed for classroom use, with strong applicability for after-school and out-of-school time (OST) learning environments
Link to the resource: The Tech Interactive
Subject area: Artificial Intelligence, Computer Science, Data Science, Computational Thinking, Engineering Design, STEM (interdisciplinary)
Grade levels: Kindergarten through Grade 12, with individual lessons targeted to specific grade bands (e.g., K–5, 3–12, 4–12, 6–8)
Tie in to AI literacy (Foundational Understanding, Ethical/societal implications, or AI tool use): The resource strongly supports multiple AI literacy strands, including:

- Foundational Understanding – Students learn what AI is, how machine learning works, and how algorithms use data to make predictions (e.g., Machine Learning Unplugged, AI to the Rescue)
- Ethical / Societal Implications – Lessons such as AI Inclusiveness and AI for Global Good explore bias, equity, and the impact of AI on society and communities

If the resource requires students to use an AI-powered product: No, AI tool use is not required.