



Building AI Literacy for Inclusion in STEM: Resources and Strategies from a National Landscape Study

August 19, 2026



National Girls
Collaborative
Project

AMD
together we advance_

 **Ingenia**
LEARNING

STEM NEXT
OPPORTUNITY FUND

Agenda & Webinar Logistics

Webinar Overview

- Meet the key partners (NGCP, AMD, STEM Next, Ingenia Learning)
- Landscape study findings and recommendations
- What we're learning from the afterschool field
- Resources

Reminders

- The recording, slides, and chat will be shared
- Remain muted - use the chat for questions and idea sharing
- There will be multiple opportunities for audience questions

NGCP Vision

The vision of the National Girls Collaborative Project is to **support and create STEM experiences** that reflect the world we live in.



NGCP Resources

National Webinars

- Offered regularly on relevant topics. Speakers include educators, researchers, authors, and diverse STEM professionals

Monthly Newsletter

- National events, STEM resources for girls and youth, professional development opportunities for educators, and research and reports

NGCP Website

- Exemplary Practices pages on Engaging Girls in STEM and Access and Equity, blog posts, and statistics and research related to girls and women in STEM



INSPIRING CURIOSITY FROM EARLY CHILDHOOD TO BREAK GENDER STEREOTYPES
THE NATIONAL GIRLS COLLABORATIVE PROJECT PODCAST

NGCP Podcast: Inspiring Curiosity from Early Childhood to Break Gender Stereotypes

In our first episode, we explore the crucial role of early childhood experiences in shaping girls' interest and engagement in STEM



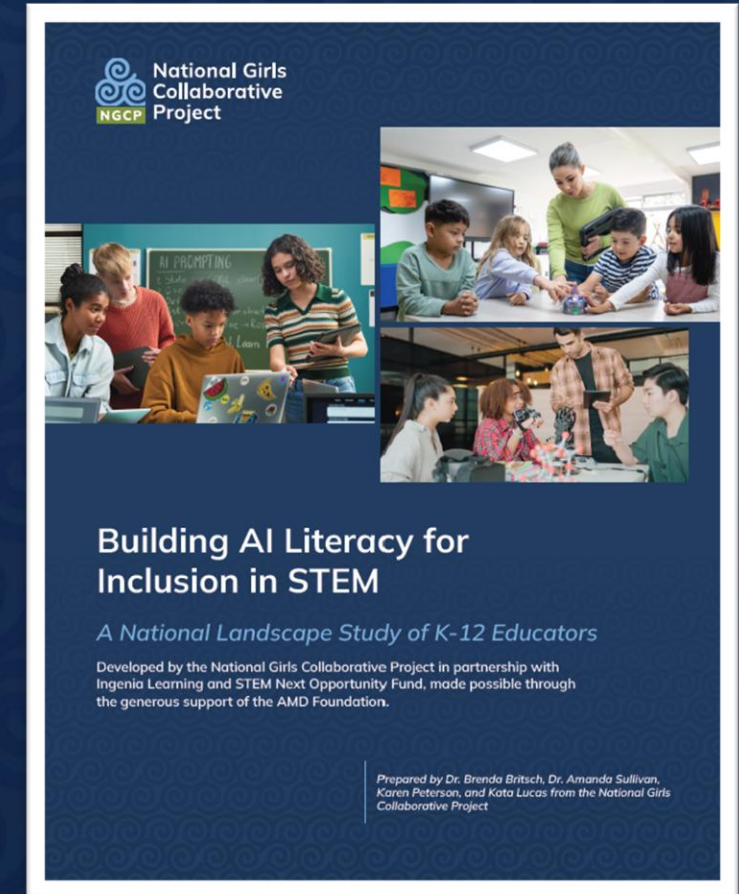
5 Ways to Be an Ally to Girls in STEM

5 Ways to Be an Ally to Girls and Women in STEM

If you think of gender equity in STEM as a "women's issue" we encourage you to think again!

Building AI Literacy for Inclusion in STEM

- A national initiative designed to better understand the current state of AI literacy across STEM learning environments.
- Developed by NGCP in partnership with Ingenia Learning and STEM Next Opportunity Fund, made possible through the generous support of the AMD Foundation.



STEM Next

- At STEM Next, we leverage collaboration, innovation, and evidence-based practices to drive meaningful change in STEM education beyond the classroom.
- Our approach ensures that every initiative is grounded in research and tailored to meet the unique needs of our communities.
- With our nationwide network of local and state partners, we spark young people's curiosity and confidence in STEM through hands-on learning opportunities beyond the classroom—connecting STEM to their interests, lives, and future careers.



Ingenia Learning

Career-Connected Learning — What We Build & Who We Serve

- K-12 curriculum, hands-on kits, and digital learning experiences
- Custom workforce programs for healthcare, manufacturing, and technology partners
- STEM labs and experiential learning spaces for schools and community sites
- Partnerships with schools, Fortune 500 companies, and national research networks (NSF, IES)
- Reaching schools, families, and workforce partners nationwide



AMD

- AMD is the high performance and adaptive computing leader, powering the products and services that help solve the world's most important challenges.
- AMD's technologies advance the future of the data center, embedded, gaming and PC markets.
- AMD is a global company setting the standard for modern computing, with many important industry firsts and major technological achievements along the way.

Project Advisors

- **Chris Agnew**, Managing Director, SCALE Initiative, Stanford Accelerator for Learning
- **Justine Chavez-Crespin**, Professional Learning & Content Manager, Computer Science Teachers Association (CSTA)
- **Tara Chklovski**, Founder & Chief Executive Officer, Technovation
- **Corliss Collier**, Sr. Director, Online Business Intelligence & Data Products, The Home Depot
- **Siobahn Day Grady**, Founding Director, Institute for Artificial Intelligence and Emerging Research (IAIER), North Carolina Central University
- **Uto Ifudu**, Head, International Business Machines Corporation (IBM) Cloud Regulatory Compliance, IBM
- **Bo Young Lee**, Chief Executive Officer, AI4ALL
- **Steven Priest**, Digital Learning Consultant, Wyoming Department of Education, State Educational Technology Directors Association (SETDA) Board Member
- **Joseph P. Wilson**, Managing Director, American Institutes for Research (AIR)

NGCP Project Team



Karen Peterson



Brenda Britsch



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Kata Lucas

Landscape Study Goals

- To understand how AI is currently being addressed across STEM learning environments
- To inform field-wide strategies and shared approaches to AI literacy that center equity and community voice
- To inform the development of training and curriculum to be developed in later stages of this work

Landscape Study Components

Literature Review

National Survey

- 552 education professionals
 - 76% formal K-12 education
 - 16% out of school time programs

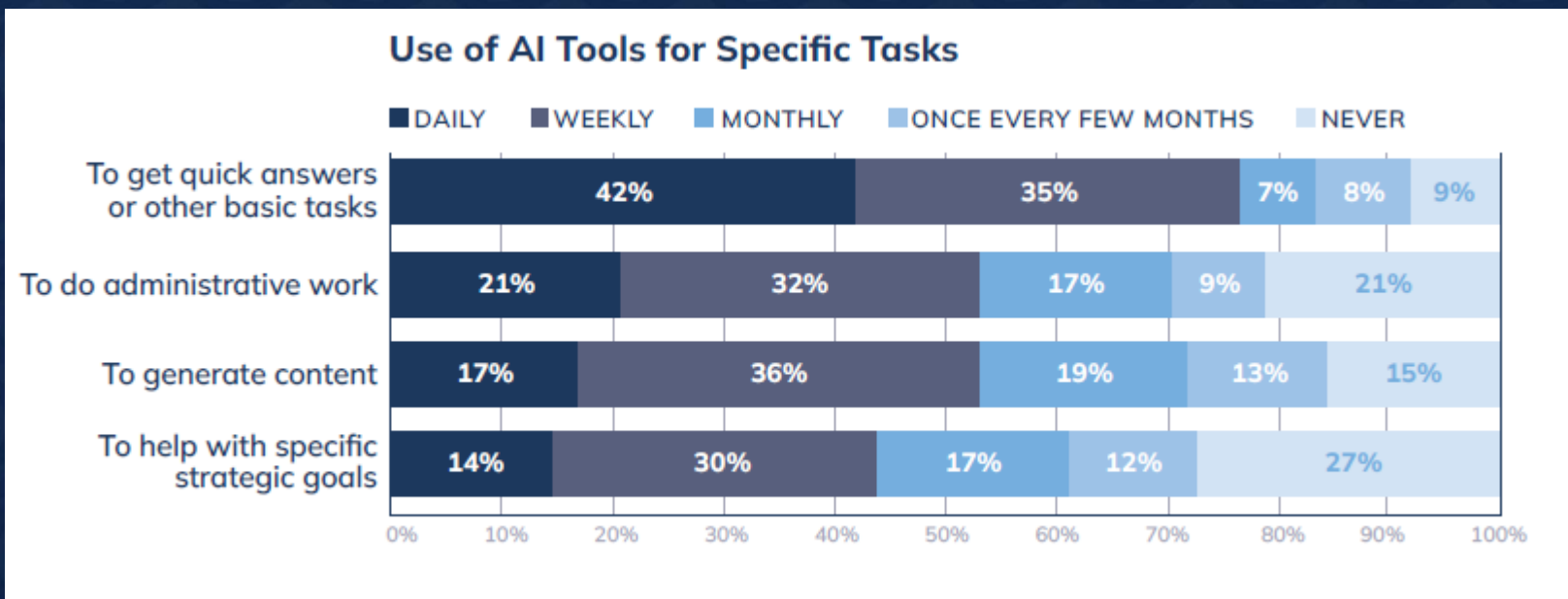
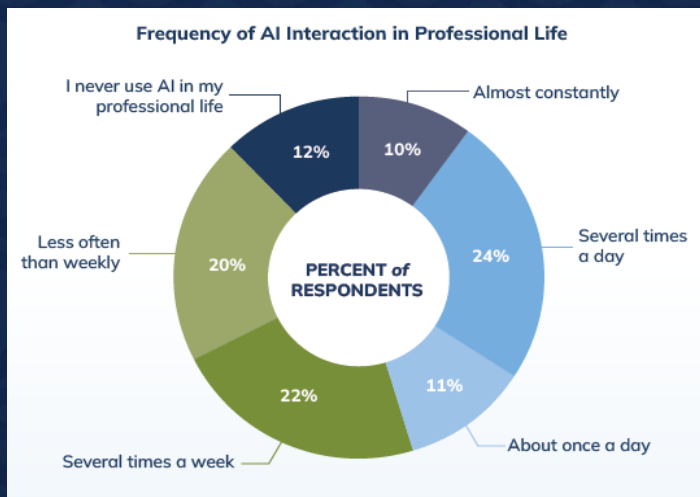
Focus Groups

- 47 educators participating in 8 small-group discussions



Key Findings

AI use is already common among education professionals, but it remains largely practical and task-oriented.



Key Findings

AI-related professional development is strongly associated with education professionals' confidence, use, and readiness to teach AI concepts.

- **74% of respondents** with more than 8 hours of training use AI almost constantly/several times a week vs 34% of all respondents
- **Respondents with more than 8 hours of training** are more likely to be extremely or very comfortable:



Key Findings

Ethical concerns, privacy issues, and limited institutional support continue to slow AI adoption.

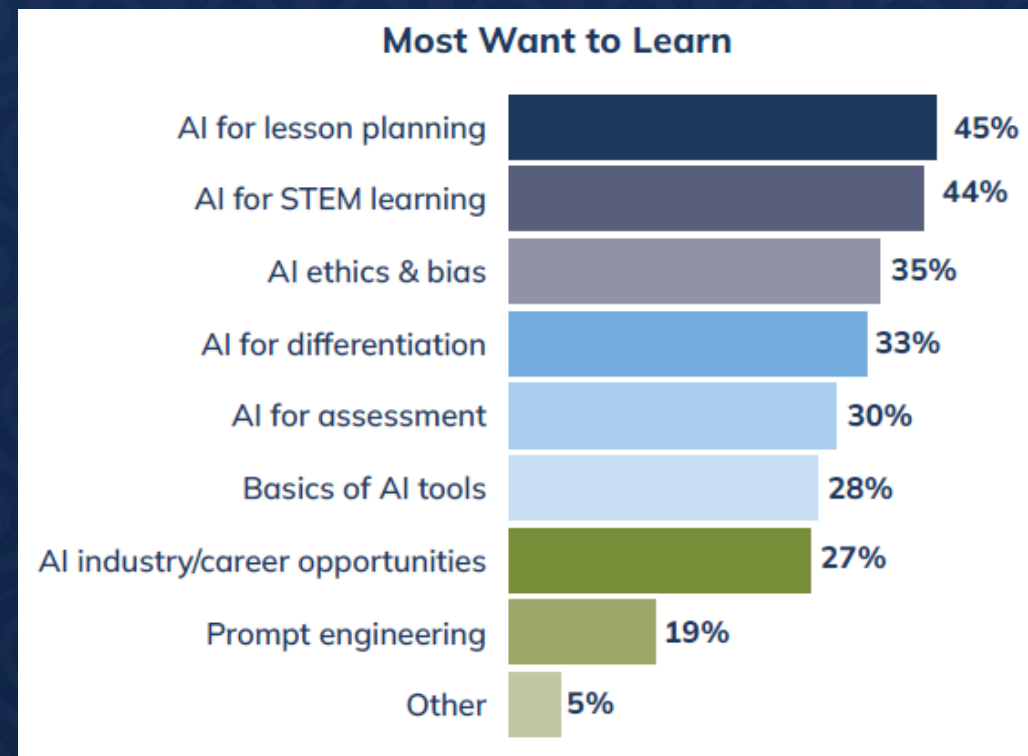
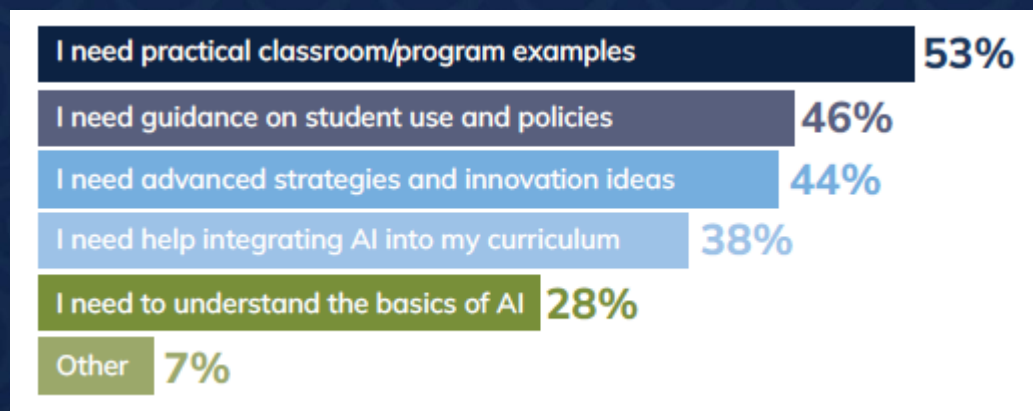
- Those with less training were more concerned about the ***lack of professional development*** and ***their ability to use AI tools***
- OST respondents were less likely to be concerned about ***students misusing AI***

What is Holding Back AI Use



Key Findings

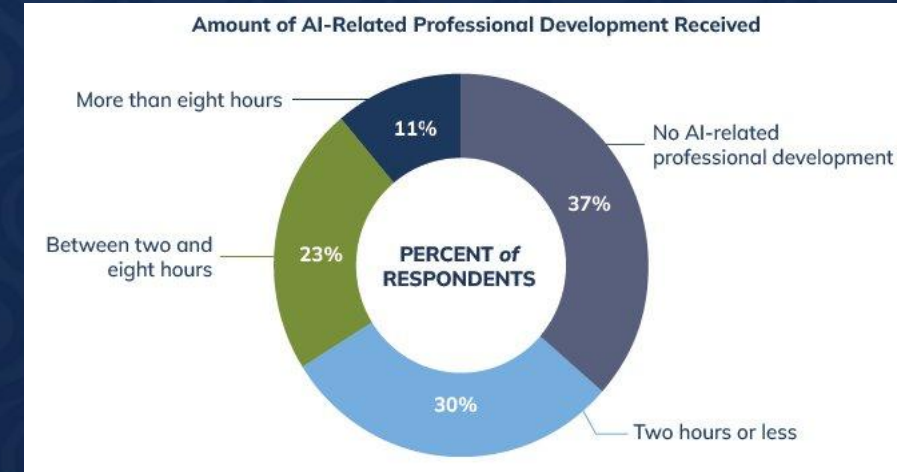
Education professionals are seeking practical, hands-on implementation support rather than introductory information about AI.



Key Findings

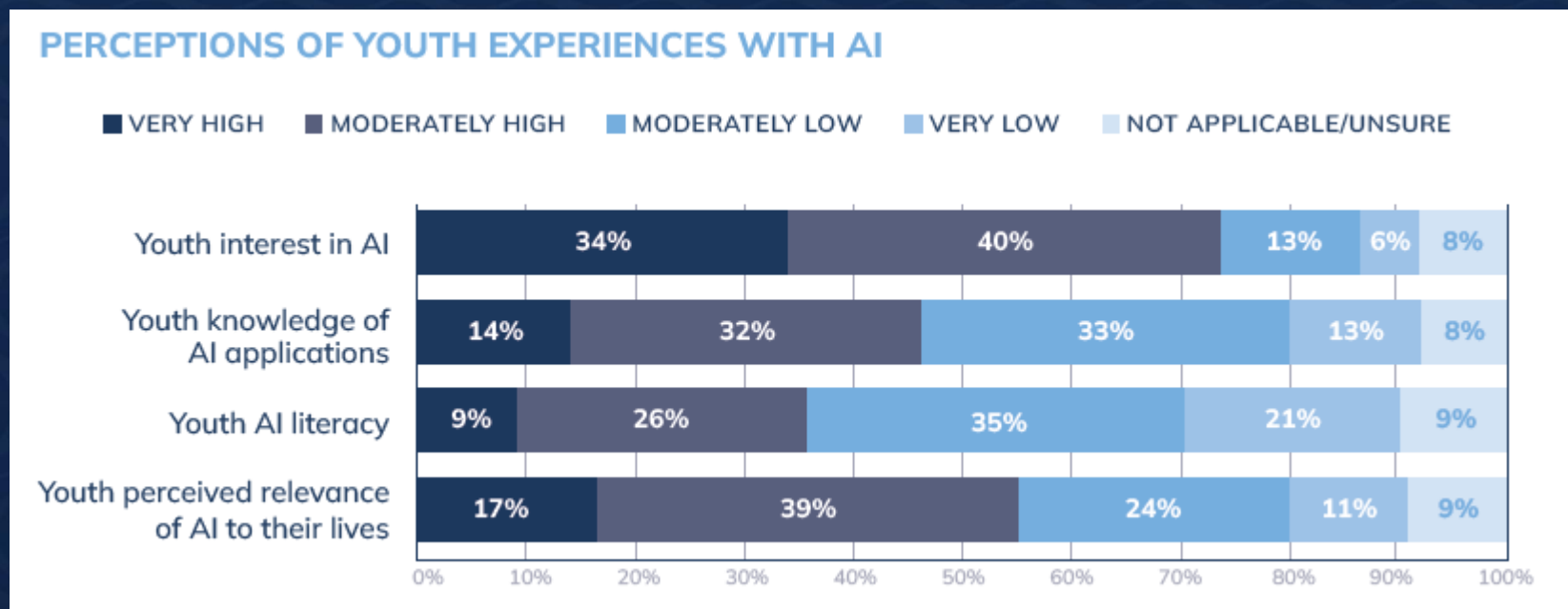
Meaningful equity and access gaps exist across types of education professionals and learning environments.

- Women, and elementary educators were ***less likely to have had AI-related training***
- OST respondents ***use AI less, are less comfortable doing many AI-related tasks, and have different concerns and training needs than K-12 educators***



Key Findings

Youth interest in AI is high, but AI literacy and critical understanding remain limited.



Recommendations

- 1. Invest in sustained, tiered AI professional development for educators.**
 - Meet educators where they are; respond to their needs
- 2. Develop clear AI guidance, policies, and decision-making tools for education settings.**
 - School/organization guidance is key; address educators' concerns

Recommendations

- 3. Prioritize equity-focused supports for lower-access groups and settings.**
 - Target educators being left out; needs differ based on organization type, role, etc.
- 4. Create practical, youth-centered AI literacy resources that support formal and informal STEM learning, future readiness, and responsible AI use.**
 - Address need to integrate into learning; include youth in process

Recommendations

5. Build a shared field-wide learning network to surface promising practices and reduce isolation.

- Support advanced use, reduce reinvention

6. Advance research to fill remaining evidence gaps and inform future practice.

- Include OST environments, youth, and longitudinal methods

Q & A

We'll take questions from the chat and from people using the 'hand raise' function.

What We're Learning from the Afterschool Field

STEM Next's Opportunity AI pilot is testing what it takes to make AI learning practical, accessible and scalable through afterschool.

Start by building adults' confidence

Educators need trusted resources, hands-on practice and peer support to build confidence.

88% Increased their confidence experimenting with AI

92% Feel more prepared to integrate AI into career-connected learning with youth.

*Early participant survey findings; final evaluation forthcoming.

Make AI approachable

AI literacy doesn't have to start with prompting techniques or using chatbots.

"We're not diving in with second graders learning how to prompt...We're learning how AI works, and giving that foundation of understanding, and then building on that as kids get older."

— Tami Jo Wilt
West Virginia Statewide Afterschool Network
& Opportunity AI participant

Resources

Curriculum Resources: Find a collection of AI literacy focused curricular resources in Appendix C

AI Literacy Frameworks and Guidance Resources: Find a collection of frameworks and high-level guidance resources in Appendix D

Learn more in Parts 2 and 3 of NGCP's AI Literacy Webinar Series

Appendix C. AI Literacy Curriculum Resources

The resources included in the table below were selected to provide illustrative examples of AI literacy curricula relevant to formal and informal K-12 learning environments and aligned with the study's focus on equitable access to AI learning opportunities. This list is intended to highlight a sample of resources currently available to educators and youth-serving organizations; it is not exhaustive and inclusion does not constitute endorsement by the National Girls Collaborative Project, Ingenia Learning, STEM Next Opportunity Fund, or the AMD Foundation.

CURRICULUM	DEVELOPED BY	DESCRIPTION
AI in Action Curriculum	Technovation	Technovation's AI in Action curriculum (50+ hours; ages 8-18) guides students through identifying a problem in their community, building an AI-powered app to address that problem, and developing an entrepreneurial plan to bring their solution to market.
AI Education Curricular Resources	The AI Education Project	Classroom resources, curriculum, activities, and more tailored to elementary through high school-aged students.
Artificial Intelligence Foundations	Code.org	A collection of curriculum (elementary, middle, and high school), professional learning, ready-to-use tools, and engaging videos to support educators' AI teaching journey.
AI Literacy Units	Common Sense Media	Quick, grab-and-go lessons to help educators support their students to think critically about AI and its impact. This collection of quick lessons (20 minutes or less) provides an introduction to AI and helps address its social and ethical impacts.
Day of AI	MIT RAISE	Free, ready-to-teach units and educator resources for ages 5-18.

Appendix D. Examples of AI Literacy Frameworks and Guidance Resources

The resources included in the table below were selected to provide illustrative examples of AI literacy frameworks and high-level guidance relevant to formal and informal K-12 learning environments and aligned with the study's focus on equitable access to AI learning opportunities. This list is intended to highlight a sample of resources currently available to educators and youth-serving organizations; it is not exhaustive and inclusion does not constitute endorsement by the National Girls Collaborative Project, Ingenia Learning, STEM Next Opportunity Fund, or the AMD Foundation.

RESOURCE	DEVELOPED BY	DESCRIPTION
A Competency Framework for AI Literacy: Variations by Different Learner Groups and an Implied Learning Pathway	Chee and colleagues	Widely cited academic article detailing a comprehensive AI literacy competency framework consisting of 8 competencies and 18 sub-competencies.
AI Learning Priorities for All K-12 Students	CSTA and AI4K12	AI learning priorities within CS education.
AI Readiness Framework	aiEDU	Readiness guidance and rubrics.
AI4K12: Five Big Ideas in AI	AI4K12 (AAAI and CSTA)	Foundational K-12 AI framework with five Big Ideas and grade-banded progressions.
AI4It Framework	OECD and European Commission	International framework: Engage, Create, Manage and Design AI.



Learn more at ngcproject.org