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SREB

Skills for an AI-Ready Workforce

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Content

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Skills for an AI-Ready Workforce

Introduction

As artificial intelligence continues to transform the workforce, all learners — students and adults alike — must be equipped with the skills necessary to thrive in a modern workplace. These competencies are no longer exclusive to those pursuing computer science or engineering disciplines; they are essential for anyone navigating a rapidly evolving, AI-integrated world.

The *Skills for an AI-Ready Workforce* document, developed by SREB's Commission on AI in Education, provides a roadmap for equipping learners with the capabilities needed to advance in today's labor market. This resource is designed for use across the entire education and workforce continuum — from K-12 schools and postsecondary institutions to workforce development agencies and employer-based training programs.

This report introduces a learning progression that helps education and training systems assess where learners are in their AI readiness journey and plan appropriate supports. The progression begins with Awareness, where learners develop a foundational understanding of AI tools and concepts. It then moves to Exploration, where learners engage with AI in guided contexts; followed by Application, where they use AI tools to solve problems and evaluate outcomes. Finally, Fluency, where they demonstrate confident, ethical and adaptive use of AI technologies. These levels apply across age groups and learning settings and are intentionally flexible — allowing learners to begin where they are and advance over time.

> "AI is transforming how companies and industries operate. We are taking an AI-forward approach, preparing our talent with these critical skills — to empower them in their work of helping the millions of people we serve achieve their best health."
>
> Craig Klopatek, Senior Vice President and Chief Information Officer, Humana Insurance

While students will need these competencies as they prepare for the workforce, adult learners and current workers also require access to structured opportunities for upskilling and reskilling. As technology automates or changes key job functions, education and workforce systems must ensure that learners of all ages and career stages gain the technical, ethical and adaptive skills necessary to remain competitive.

Consistent with the commission's policy recommendation on standards, AI skills must be embedded across all academic subjects and career pathways. In English language arts, students might use AI to revise writing or evaluate persuasive arguments. In mathematics, they may analyze patterns in data using AI-powered tools. In science, students could model systems or test hypotheses through AI simulations, and in social studies, they might examine how algorithms influence civic discourse. Embedding AI across disciplines not only enriches learning but also builds real-world readiness.

Ultimately, this resource supports leaders in evaluating and updating programs to meet the current expectations of the workforce. It also provides guidance for business and industry partners as they consider how to incorporate AI readiness into in-house training and workforce development strategies. By taking action across sectors, states can ensure that all learners are prepared to navigate and contribute meaningfully to an AI-driven future.

Skills for an AI-Ready Workforce Overview

The *Skills for an AI-Ready Workforce* framework offers a clear, structured approach for building essential competencies that support AI literacy and workplace adaptability. Developed by the Skill Development Subcommittee of SREB's AI Commission, the framework is informed by input from education leaders, training providers, and industry partners across the SREB region. It is designed to help education and workforce leaders evaluate current programming and build a future-ready talent pipeline that reflects the realities of an AI-integrated workforce.

The subcommittee reviewed labor market trends, analyzed education and workforce training standards across SREB states, and consulted with employers on the practical applications of AI in the workplace. This informed a framework that balances foundational and technical skills while emphasizing real-world relevance.

At the core of the framework are three interrelated skill groupings.

- **Success Skills** — Adaptable, human-centered abilities like communication, collaboration, problem-solving, and leadership that remain vital even as roles evolve.
- **Industry Baseline Skills** — Competencies that ensure learners understand how AI impacts workplace decision-making and accountability, such as AI ethics, cybersecurity and domain-specific knowledge.
- **Technical Skills** — The ability to work with AI tools, including data interpretation, algorithmic reasoning and understanding concepts like machine learning and generative AI.

These skill areas are scaffolded by a four-level learning progression — Awareness, Exploration, Application, and Fluency — that helps leaders design instruction and training aligned to learner needs. The progression supports flexible entry points for both students and adults and can be applied to any learning environment, whether formal or job-embedded.

By combining these skill categories with a clearly defined developmental structure, the framework serves as a tool for education and workforce leaders to review and revise existing academic standards, degree and certificate programs, and course offerings. It supports systems in determining where skills are present, where they need to be strengthened, and how to ensure learners — whether graduating from high school, completing postsecondary programs or advancing through workforce training — can use AI technologies effectively, ethically and with confidence.

This approach offers a practical, forward-looking path to prepare learners not just for today's technologies but for a future where adaptability, ethical decision-making, and technical confidence will be critical to success in every discipline and every workplace.

Recommended Actions

These recommendations provide actionable steps for state leaders, agency officials, education leaders and workforce training providers to implement the competencies outlined in this publication. The steps are designed to support the development of essential AI-related skills across K-12, postsecondary and workforce settings — ensuring continuous learning and adaptability in a rapidly evolving, technology-rich economy.

Grounded in the *Skills for an AI-Ready Workforce* framework, the recommendations help systems apply the skill categories and developmental progressions to decision-making around program design and improvement. They guide leaders in aligning standards, curricula and training opportunities to ensure all learners — regardless of age or background — develop the skills needed to thrive in an AI-driven future.

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1. Embed AI Across Core Content and Career and Technical Education Standards

To prepare all learners for an AI-integrated future, state and institutional leaders — including those in K-12, postsecondary education and workforce training — should conduct a comprehensive review of academic standards, career and technical education frameworks and postsecondary program competencies. This review should identify where AI-related skills can be embedded within existing content and process standards, rather than isolating AI as a standalone subject.

Anchor standards (broad learning goals across subjects) and process standards (transferable skills such as collaboration and problem-solving) serve as natural entry points. At the same time, content standards provide an opportunity to link AI skill development directly to subject-area knowledge and performance.

States and systems are encouraged to analyze where success, industry baseline or technical skills are already reflected in current standards, determine which progression levels are addressed, and identify where new or revised expectations could strengthen skill development.

For example:

- **English language arts:** Students might use AI tools to brainstorm, organize and revise writing, similar to tools used in journalism, marketing and communications.
- **Mathematics:** AI-powered visualization platforms can help students explore data trends and make predictions, much like financial and logistics professionals do.
- **Science:** Students can test variables in AI simulations to model ecological or chemical processes, just as researchers use predictive tools in lab settings.
- **Social studies:** Learners may investigate how algorithms influence political discourse, reflecting the real-world responsibilities of civic leaders and media analysts.

These integrations deepen academic rigor while connecting students to real-world technologies and applications. See Appendix A for additional guidance.

2. Strengthen and Modernize Digital Learning and Computer Science Standards

States should review and update digital learning and computer science standards to ensure they reflect the competencies — the knowledge, skills and behaviors that learners must demonstrate — outlined in the AI learning progression and skills framework. This work is essential to support the systematic development of AI fluency, beginning in the early grades and extending into postsecondary education and workforce training.

The AI learning progression introduced in this report — a developmental sequence describing what learners should be able to do as they move from Awareness through Exploration to Application and Fluency — can serve as a scaffold for standards revision. These levels offer a structured path for building AI-related competencies while maintaining flexibility for learners who may encounter AI tools for the first time at any stage, regardless of age or educational level.

For example:

- **Awareness** descriptors can inform updates to elementary-level digital literacy standards, where students begin exploring what AI is, how it functions, and its impact on their lives and communities.
- **Exploration** descriptors may guide revisions to middle school standards, supporting students as they begin to interact with AI tools in structured, hands-on learning.
- **Application** level aligns well with high school standards, where students can be asked to apply AI tools in more independent, problem-solving contexts.
- **Fluency** becomes a target for advanced high school courses, postsecondary programs, and workforce training, where learners demonstrate confidence, adaptability and ethical decision-making in the use of AI technologies.

This progression-based approach also ensures onramps for adult learners and those with no prior exposure to AI. If learners enter a program without foundational knowledge, systems should begin at the Awareness level, regardless of age, to build understanding and confidence before advancing through more complex applications.

Digital learning and computer science standards should also explicitly address **core competencies** such as:

- **Data privacy and digital citizenship**
- **Cybersecurity awareness**
- **AI ethics and algorithmic bias**
- **Human-computer interaction**

These elements are vital for preparing all learners — not just future computer scientists — to navigate a digital world responsibly and effectively.

States should establish regular review and revision cycles for these computer science and digital learning frameworks. Updates should be informed by advances in AI and emerging tools, as well as by workforce needs and feedback on classroom implementation. Providing educators with guidance on how to differentiate instruction based on the learning progression will ensure that instruction remains developmentally appropriate and relevant to both academic and workplace contexts.

3. Strengthen Collaboration with Industry, Workforce Agencies, and Economic Development Organizations

AI readiness cannot be achieved through education alone. Cross-sector partnerships are essential for aligning learning outcomes with the demands of the labor market.

States should expand collaboration to include industry leaders, workforce commissions, chambers of commerce, professional associations, economic development agencies and workforce training providers. These partners bring critical insight into how AI is transforming specific sectors, from logistics and healthcare to finance and manufacturing.

Through these partnerships, education and training leaders can co-develop crosswalks — tools that map or align AI-related skills with the competencies needed in high-demand occupations. This collaborative work should include identifying priority use cases (specific examples of how AI is transforming job roles), aligning skill development stages with workforce readiness expectations, and establishing feedback loops to validate and refine training content based on evolving industry needs.

Such collaboration also creates a foundation for expanding apprenticeships, employer-led training programs, and in-house upskilling aligned to the three AI skill categories. A coordinated approach ensures that both new and existing workers have access to the competencies needed to thrive in an AI-driven economy.

4. Embed AI-Ready Competencies Across Workforce Training and Upskilling Programs

To meet the demands of a changing economy, adult learners and working professionals must develop skills beyond human-centered soft skills. Workforce and training programs should ensure that all learners, regardless of background, build competence across the full spectrum of AI readiness: success skills, industry baseline skills and technical skills.

Workforce training should continue to prioritize skills such as leadership, project management and collaboration. These success skills are critical for navigating environments shaped by automation, remote work, and cross-functional teams. However, training must also include industry baseline skills — like AI ethics, cybersecurity awareness and data literacy — so that workers understand the implications of AI in their specific jobs.

Additionally, adult learners require a foundational level of technical skills to interact with AI technologies confidently. This includes understanding how AI tools work, interpreting their outputs, and applying them effectively to workplace problems or processes.

These competencies should be scaffolded using the **learning progression**:

- At the **Awareness** stage, workers explore how AI tools impact their sector and society.
- At the **Exploration** stage, learners experiment with AI applications in structured, job-relevant contexts.
- At the **Application** stage, learners solve workplace challenges using AI technologies and assess their effectiveness.
- At the **Fluency** stage, individuals demonstrate the ability to adapt to new tools, evaluate AI-generated results, and lead collaborative efforts that integrate AI into business functions.

Training providers should tailor instruction to the needs of local or regional industries and align instruction with occupational roles and advancement pathways. This holistic, integrated approach ensures adult learners are not only employable but positioned for leadership and advancement in their workplace.

5. Provide Comprehensive AI Professional Development for Educators

In line with the commission's policy recommendation on professional development, all educators — including teachers, faculty, counselors, administrators, instructional coaches and support staff — must have access to high-quality professional development that builds their capacity to understand, apply and teach AI-related skills. This training ensures that AI is used not as a standalone topic, but as a tool to enhance teaching and learning across all disciplines and career pathways.

Professional development should focus on two key areas:

1. **Technical fluency** — helping educators become confident and responsible users of AI tools themselves; and
2. **Instructional integration** — equipping them to embed AI-related skills into existing academic and workforce curricula.

Training should be explicitly aligned to the SREB AI Skills Framework and learning progression featured in this report. Educators need support to:

- Understand the progression from awareness to fluency, and how to scaffold learning at each level;
- Embed success skills, industry baseline skills and technical skills into their content area or student support responsibilities;
- Model ethical, transparent and effective AI use in classroom and instructional contexts.

This professional learning must be role-specific and discipline-relevant. For instance:

- **Math teachers** might explore AI-based modeling or data visualization tools;
- **ELA teachers** might focus on evaluating AI-generated text for tone and bias;
- **CTE instructors** might integrate AI into simulations and project-based learning;
- **Counselors and advisors** can guide students and families in understanding how AI is shaping postsecondary options and career pathways.

To ensure access to AI professional development, states should leverage existing professional networks and leadership programs. Content-area organizations, such as math or science teacher associations, offer natural platforms for integrating AI training into ongoing professional development.

Embedding AI-related professional development into these organizations ensures that educators across roles and contexts, not just early adopters, are equipped to prepare learners for success in an AI-driven world. It also creates opportunities for **peer learning, shared resources** and **instructional leadership** that reinforce AI integration system wide.

6. Establish Monitoring and Evaluation Mechanisms for AI Readiness

To ensure AI readiness efforts are effective and responsive to change, states and institutions must develop comprehensive systems to evaluate progress across K-12, postsecondary and workforce programs. These systems should measure both learner development and the alignment of programs to the competencies outlined in this report.

Evaluation mechanisms should be anchored in the *SREB Skills for an AI-Ready Workforce* framework — tracking how well success skills, industry baseline skills and technical skills are being taught, and whether learners are progressing through the stages of Awareness, Exploration, Application and Fluency.

Leaders should collect and analyze data from multiple sources to assess the impact of AI-related learning efforts, including:

- Student and worker skill development across subjects and pathways,
- Educator and training provider professional development outcomes,
- Program-level integration of AI-related competencies,
- Feedback from employers, workforce agencies, and postsecondary institutions.

These systems should evaluate not only how frequently AI concepts are introduced, but also how deeply learners are engaging with them — particularly their ability to think critically, solve problems and apply AI tools effectively.

By using the skills framework to guide decision-making, states and systems can make data-informed decisions that keep education and workforce programs aligned with technological advancements and labor market demands.

To support continuous improvement, states should establish review cycles that allow for regular refinement of standards, program and instructional practices. This includes identifying areas where additional support or redesign is needed, such as:

- gaps in access to AI learning opportunities based on geography, income or institution type;
- disparities in implementation across schools, districts or training systems; and
- inconsistencies between what is taught and what employers expect in AI-integrated roles.

By using the skills framework to guide decision-making, states and systems can make data-informed decisions that keep education and workforce programs aligned with technological advancements and market demands — while ensuring all learners have opportunities to build AI fluency.

Skill Progressions

The skill progression framework provides a structured pathway for building AI readiness, organized into four distinct levels: Awareness, Exploration, Application and Fluency. These progressions are designed to support learners of all ages — from students in early grades through postsecondary education, as well as adults currently in the workforce or seeking new career pathways.

This framework is designed for learners at all stages of life and career — whether they are students building foundational skills or adults seeking to reskill or advance in their professions. The four levels of progression reflect phases of growth that may occur at any point in an individual's learning journey. Learners may find themselves at different levels across various skill areas. For example, an individual may demonstrate fluency in communication and problem-solving while concurrently developing awareness in cybersecurity or generative AI.

Rather than aligning skill levels with age or formal education stages, this progression recognizes that learning is dynamic and context-dependent. The flexibility of the framework ensures its relevance for updating K-12 academic standards, guiding postsecondary programs, and shaping workforce training or upskilling initiatives. It serves as a tool for reflection, planning and advancement across both educational and professional environments.

Progression Levels Breakdown

Awareness – Introduce and Build an Understanding of AI

At the Awareness stage, learners begin to develop a foundational understanding of AI concepts and tools. They explore how AI systems gather and use data to make decisions, often through guided exploration and curiosity-driven activities. Whether in a classroom or a workplace setting, the goal is to cultivate recognition of AI's presence in everyday life and an early understanding of its impact on people and society.

Exploration – Use and Investigate AI Tools

At the Exploration stage, learners begin to interact with AI tools in practical and increasingly independent ways. They experiment with prompts, analyze outputs and consider how AI can be used to solve simple problems. Learners are introduced to the limitations of AI, including its potential for bias, and begin to think critically about the results produced by these tools. This stage supports creativity, critical thinking and early problem-solving across learning environments and job roles.

Application – Apply and Evaluate AI

The Application stage is marked by a deeper, more purposeful use of AI tools to address complex challenges. Learners use data to inform decisions, evaluate the accuracy of AI-generated content, and refine their approaches through iteration. Ethical considerations become central, with learners assessing how AI is used in real-world contexts and examining issues such as misinformation, bias and fairness. This level supports project-based learning, workplace simulations and domain-specific problem-solving.

Fluency – Demonstrate Expertise and Adaptability

At the Fluency stage, individuals demonstrate confident, flexible use of AI across disciplines and industries. They lead projects that integrate AI tools, adapt to emerging technologies, and guide others in the responsible and effective use of these systems. Fluency includes the ability to innovate, solve interdisciplinary challenges, and evaluate evolving AI systems with a focus on ethics, efficiency and human impact. This level aligns with leadership roles, advanced workforce training and specialized academic pathways.

This progression is grounded in AI ethics and human oversight, emphasizing that responsible use of technology must be central at every stage of learning. Regardless of age or background, all learners should develop AI-related skills with a clear understanding that technology is intended to support — not replace — human judgment. Business and industry leaders reinforced the critical importance of embedding ethical considerations and human accountability across all educational and workforce contexts. By integrating these principles throughout the skill development process, learners will be better prepared to critically assess AI outputs and apply technology thoughtfully and responsibly in real-world settings.

Workforce and education systems alike will need to be prepared to meet learners where they are. Until foundational AI-related skills are consistently developed throughout K-12 and postsecondary education, many students and adults will need support at varying stages of the progression. Learners may enter at any level, from Awareness to Fluency, depending on their prior experiences, exposure and opportunities.

Skill Descriptions and Sample Grade-Level Descriptors

Success Skills

Success skills are essential for thriving in today's evolving workforce. They encompass personal qualities such as critical thinking, effective communication, adaptability and collaboration — traits that enhance job performance across all industries. As technology advances, workers will increasingly rely on these transferable skills to interact with AI tools, interpret outcomes and apply insights in ways that only human judgment can provide.

SREB's 2023 report, *The Skills Employers Demand: An Analysis of the Research*, reviewed job postings and workforce literature to identify the top skills employers seek. Many of the success skills outlined in that report — such as communication, teamwork and collaboration — align with those findings. However, this framework focuses specifically on the skills needed to enter and advance in a technology-rich environment and workforce. As AI and automation reshape industries, workers will need to develop leadership, project management and adaptability skills to navigate evolving roles and responsibilities.

Recognizing this, state leaders and educators are encouraged to prioritize these skills within career technical education, workforce training and across all content areas. Many states have already established employability or success skill lists, some of which include additional competencies. While those broader lists remain valuable, the goal of this report is to highlight the specific success skills essential for thriving in an AI-integrated workplace — not to provide an exhaustive list of general employability skills.

Business and industry experts consistently rank communication and leadership as top priorities. Communication is foundational, as future workers must be able to effectively convey ideas to both AI systems and human colleagues. As automation takes over routine tasks, leadership and project management will become increasingly important, enabling individuals to guide teams and make strategic decisions in technology-enhanced workplaces.

By embedding these competencies across disciplines and workforce training programs, educators can ensure that learners develop the resilience, adaptability and collaboration skills necessary to succeed in an AI-driven economy. These skills are not isolated to career preparation — they are integral to all learning environments, ensuring that students can apply them in real-world contexts as they progress through education and into the workforce.

Success Skills	Awareness Introduce and Build an Understanding of AI	Exploration Use and Investigate AI Tools	Application Apply and Evaluate AI	Fluency Demonstrate Expertise and Adaptability
Communication Skills Proficiency in conveying technical and non-technical information effectively to a variety of audiences in both written and oral formats, including structuring precise prompts for AI tools to enhance clarity, efficiency, and problem-solving.	Learners practice foundational communication skills through storytelling, presentations, and active listening. They begin exploring how language and wording influence AI responses, experimenting with simple prompts and basic digital tools.	Learners develop structured communication by delivering presentations and adapting messages for different audiences. They refine prompt-writing for AI tools, gaining insight into how specific wording affects the accuracy and clarity of AI-generated outputs.	Learners present complex ideas using AI-generated content and data visualizations. They evaluate AI responses for relevance and accuracy, iteratively adjusting prompts and communication strategies in both academic and professional contexts.	Individuals demonstrate advanced, audience-specific communication skills to support decision-making, leadership, and collaboration. They optimize AI prompts for research, content creation, and problem-solving, ensuring outputs are precise, ethical, and effective in real-world settings.
Leadership and Project Management Skills in planning, executing and managing projects with a strong emphasis on ethical decision-making, collaboration and strategic leadership.	Learners are introduced to the basics of leadership and project work through small-group activities. They begin to take initiative, organize simple tasks, and make fair decisions while working collaboratively, gaining early exposure to ethical considerations and group dynamics.	Learners expand their responsibilities by planning and managing short-term projects. They begin delegating tasks, making decisions with support, and reflecting on how leadership approaches and ethical choices influence outcomes and team effectiveness.	Learners apply leadership and project management skills in more complex, interdisciplinary settings. They plan, execute, and oversee projects while using collaborative tools and ethical frameworks to guide decision-making and drive team performance.	Individuals lead professional or cross-functional teams to deliver results in dynamic environments. They demonstrate strategic thinking, ethical leadership, and project oversight, guiding innovation and ensuring accountability in AI- and technology-integrated contexts.
Teamwork and Collaboration Ability to work effectively in teams, communicate ideas clearly, and collaborate on projects while demonstrating respect for others' perspectives and contributing to shared goals.	Learners begin developing collaboration skills by working in small groups to share ideas, listen actively, and support group efforts. Early activities help learners recognize their own strengths and understand how individual contributions support team success.	Learners participate in structured projects that involve planning, role assignment and cooperative problem-solving. They begin developing strategies for working with others, navigating differing viewpoints, and contributing effectively in team environments.	Learners contribute to interdisciplinary projects using AI tools to address real-world challenges. They refine their communication and teamwork skills while evaluating how collaboration strategies affect project outcomes and how AI can support, but not replace, effective group work.	Individuals coordinate team-based efforts in academic and professional settings. They lead collaborative projects, integrate expertise across roles or domains, and apply tools and processes to improve team performance and achieve shared objectives.

Success Skills	Awareness Introduce and Build an Understanding of AI	Exploration Use and Investigate AI Tools	Application Apply and Evaluate AI	Fluency Demonstrate Expertise and Adaptability
Critical Thinking Ability to analyze complex problems, evaluate the reliability of information, and develop effective solutions through inquiry, reasoning and research.	Learners begin developing critical thinking by exploring puzzles, experiments and stories that prompt curiosity and inquiry. They are introduced to basic strategies for asking questions, identifying patterns, and distinguishing facts from opinions.	Learners engage in structured activities such as science projects, debates and case studies to evaluate information. They practice assessing the credibility of sources, analyzing simple data, and using evidence to support conclusions.	Learners apply critical thinking to solve complex challenges using project-based and interdisciplinary approaches. They analyze data, verify sources, and assess AI-generated outputs to ensure accuracy, clarity and reliability in academic or workplace settings.	Individuals synthesize information from multiple sources, conduct research, and make informed, strategic decisions. They evaluate the implications of AI-generated insights and apply critical thinking to guide actions in professional, technical or leadership roles.
Creativity Ability to generate original ideas, approaches and solutions by thinking beyond conventional methods and applying innovative strategies.	Learners begin developing creativity through imaginative play, storytelling and exploratory projects. They experiment with different ways to express ideas and explore new perspectives in a supportive environment.	Learners participate in design challenges, collaborative tasks and problem-solving activities. They begin using digital tools and AI applications to support and expand their creative thinking.	Learners develop original ideas and practical solutions through interdisciplinary projects, innovation labs and entrepreneurial experiences. They apply AI and emerging technologies to enhance creativity in authentic contexts.	Individuals integrate creative thinking with advanced tools, data insights and design strategies to generate new solutions in professional settings. They lead innovation efforts and apply creativity to solve complex problems and drive progress in their fields.
Continuous Learning Commitment to ongoing learning and skill development in order to keep pace with evolving technologies, tools and industry practices.	Learners are encouraged to explore new ideas and develop curiosity through interactive activities, reading and hands-on experiences. This stage promotes a positive attitude toward learning and introduces the concept that skill development continues throughout life.	Learners engage in self-paced modules, digital research and reflection activities that build ownership of the learning process. They begin to set personal goals, take on new challenges, and recognize the value of continued learning to improve skills and adapt to change.	Learners pursue advanced coursework, independent projects, and enrichment opportunities to deepen knowledge. They begin exploring certification programs, online courses and other skill-building tools that align with career and academic goals.	Individuals actively engage in professional development, training programs and continued education. They seek out certifications and advanced learning opportunities to stay current with emerging technologies, enhance career growth, and lead ongoing improvement in their fields.

Success Skills	Awareness Introduce and Build an Understanding of AI	Exploration Use and Investigate AI Tools	Application Apply and Evaluate AI	Fluency Demonstrate Expertise and Adaptability
Adaptability Flexibility to adjust to new technologies, tools and environments in response to evolving information, challenges and workplace demands.	Learners are introduced to new tools and technologies through interactive activities and guided exploration. They begin developing curiosity, confidence and a willingness to engage with changing environments and unfamiliar systems.	Learners use a variety of digital tools for research, collaboration and presentations. They practice adapting to new challenges by exploring emerging technologies and adjusting their approaches in different learning or task-based settings.	Learners participate in real-world projects, collaborative platforms, and AI-integrated environments. They demonstrate the ability to adjust quickly to evolving technologies, shifting priorities, and updated information within academic and workplace scenarios.	Individuals effectively integrate new tools, technologies and workflows into professional roles. They respond to automation, AI-driven processes, and workplace change with flexibility and resilience, maintaining performance and contributing to continuous improvement.
Problem Solving Capability to approach problems logically and creatively, leveraging AI tools and prompt engineering while maintaining human oversight in decision-making.	Learners begin developing problem-solving skills through puzzles, classroom challenges, and hands-on activities that promote logical thinking. They explore how AI can support simple tasks by asking structured questions and begin to understand the importance of human guidance in using AI tools.	Learners engage in open-ended challenges such as designing solutions and refining AI-generated suggestions. They experiment with writing prompts, evaluate AI outputs, and begin identifying when human decision-making is necessary to address errors or limitations.	Learners use multidisciplinary approaches — such as engineering projects or simulations — to solve real-world problems. They iterate on AI prompts to improve tool performance, critically assess AI-generated insights, and determine when human oversight is essential for accuracy and responsible use.	Individuals solve complex problems using advanced prompt engineering and AI-driven insights. They generate and refine solutions across professional settings, evaluate AI performance, and ensure that human expertise and accountability are maintained throughout the decision-making process.

Industry Baseline Skills

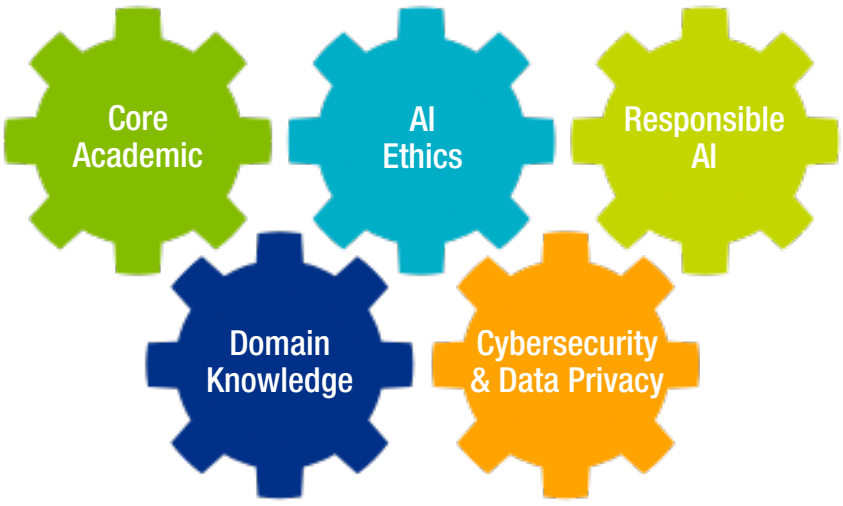
In today's technology-driven workforce, industry baseline skills are essential for equipping both students and adults with the foundational knowledge required to effectively engage with current and emerging technologies. As artificial intelligence and automation continue to reshape job roles, these competencies — including core academic knowledge, domain knowledge, AI ethics, cybersecurity, data privacy and responsible AI use — are increasingly critical across all career pathways.

Strong core academic skills in mathematics, science, social studies and language arts support essential capabilities such as critical thinking, data literacy and analytical reasoning. These skills form the basis for crafting effective AI prompts, interpreting AI-generated outputs, and understanding how technology functions across disciplines. In parallel, domain-specific knowledge enables individuals to accurately apply AI tools within their fields, optimizing processes, supporting decision-making and driving innovation.

This skill set also includes an understanding of ethical frameworks and digital security principles that ensure responsible technology use. Mastery in these areas supports adaptability, employability and career advancement in an evolving workforce.

The development of industry baseline skills follows a progression that supports all learners — whether they are just beginning to engage with AI or are advancing their use of technology in specialized fields. Using the Awareness → Exploration → Application → Fluency structure, this framework recognizes that learners may move through different levels of proficiency across various skill areas. The progression supports not only K-12 academic standards but also postsecondary education, workforce training and adult upskilling programs.

To ensure these skills are meaningfully embedded in learning environments, states and institutions should integrate them into academic courses, career and technical education pathways, and professional learning programs. Embedding AI-related competencies within subject-area and workforce contexts ensures that learners can apply technology effectively, responsibly and with increasing independence.



Industry Baseline Skills	Awareness Introduce and Build an Understanding of AI	Exploration Use and Investigate AI Tools	Application Apply and Evaluate AI	Fluency Demonstrate Expertise and Adaptability
Core Academic Skills Foundational knowledge and competencies in subjects such as mathematics, science, social studies and language arts. These skills support learners in understanding, communicating and solving problems across fields, enabling effective interaction with AI and other technologies.	Learners build foundational academic skills through hands-on activities that connect core subjects to everyday experiences. They begin exploring how technologies like AI can support basic tasks, such as recognizing data patterns or generating text, while developing early reasoning and communication abilities.	Learners strengthen academic competencies by participating in interdisciplinary projects that incorporate technology and data. They apply math and science to real-world problems, investigate current or historical topics in social studies, and explore how reading and writing skills support analysis and communication in digital environments.	Learners apply advanced academic skills in integrated projects such as statistical analysis, data modeling, and research. They critically assess how technology is used to generate and structure information, evaluate sources, and refine outputs for clarity, accuracy and relevance across subject areas.	Individuals apply academic knowledge in professional and research settings by integrating emerging technologies into decision-making, analysis, and communication. They use core academic skills to solve complex problems, interpret data, and evaluate technology-driven outputs, ensuring tools are applied effectively and responsibly within their fields.
Domain Knowledge Understanding of industry-specific knowledge that supports the practical application of AI and other technologies to solve problems, drive innovation, and improve efficiency. This includes awareness of career pathways and the evolving role of technology across professions.	Learners are introduced to a variety of career fields through simple projects, guest speakers, and virtual experiences. They begin exploring how professionals use technology in sectors such as healthcare, agriculture, manufacturing, and business, building curiosity about how different industries apply tools to improve outcomes.	Learners participate in hands-on activities that highlight challenges and tasks common in specific industries. They examine how AI and emerging technologies are used across professions to support decision-making, increase efficiency, and solve problems.	Learners apply domain-specific knowledge through real-world projects, case studies, and collaborative experiences with industry partners. They explore career pathways by participating in internships, mentorships, or simulations that require the use of AI and related technologies to create innovative solutions.	Individuals apply advanced industry knowledge in professional settings through training, research or work-based learning. They lead innovation efforts, optimize systems, and adapt to technological advancements by applying tools and strategies specific to their field.
AI Ethics Understanding and applying ethical and legal principles in the development and use of AI technologies, with an emphasis on fairness, transparency, accountability and the minimization of harm and bias.	Learners explore basic ethical principles such as fairness, honesty, and responsibility through age-appropriate examples and discussions. They are introduced to the idea that technology should be used in ways that respect others and promote fairness.	Learners begin identifying ethical concerns in technology use, such as misinformation, bias, and over-reliance on tools. Through structured activities, they explore how choices in technology use can affect outcomes and examine how fairness and accuracy can be influenced by design.	Learners analyze ethical principles through real-world AI applications and legal considerations. They assess case studies, debate challenges related to bias and accountability, and propose strategies to support responsible and fair use of AI in school, community, or simulated workplace environments.	Individuals apply legal frameworks, industry standards, and ethical guidelines to real-world scenarios. They develop and implement policies that promote transparency, minimize harm, and ensure responsible AI use, contributing to decision-making that supports fairness and accountability in professional settings.

Industry Baseline Skills	Awareness Introduce and Build an Understanding of AI	Exploration Use and Investigate AI Tools	Application Apply and Evaluate AI	Fluency Demonstrate Expertise and Adaptability
Cybersecurity and Data Privacy Understanding principles and practices that protect digital systems, personal data and AI technologies, with a focus on privacy, data awareness, security and ethical responsibility.	Learners are introduced to the importance of protecting personal information and practicing safe behavior online. Through interactive activities, they begin to recognize what data is shared digitally and understand the need for caution when using devices and digital tools.	Learners explore how personal data is stored, transmitted, and potentially exposed. They examine basic cybersecurity threats, discuss responsible data sharing, and investigate how everyday actions — such as using apps or websites — can affect personal privacy.	Learners apply foundational cybersecurity skills to analyze case studies, assess security risks, and explore practices such as encryption and authentication. They evaluate how organizations collect and protect data, considering legal and ethical responsibilities in maintaining privacy and system security.	Individuals implement cybersecurity frameworks to protect information systems and mitigate risks in professional environments. They assess vulnerabilities in AI systems, apply advanced security practices, and ensure compliance with legal and ethical standards to safeguard sensitive data and promote responsible data use.
Responsible AI Utilizing AI technologies in alignment with ethical principles, societal values, and regulatory standards promotes trust, safety and the well-being of all stakeholders. This also includes preparing individuals to become effective and responsible consumers of AI products, capable of evaluating and interacting with these tools thoughtfully and safely.	Learners are introduced to responsible technology use through safety rules, guided activities, and basic exploration of how AI makes decisions. They begin to understand that while AI tools can be helpful, people must use them thoughtfully and with care for others.	Learners examine how AI can affect people and communities by exploring fairness, transparency, and bias through classroom discussions and projects. They begin to understand the importance of regulations and explore how responsible technology use supports trust and safety.	Learners analyze case studies and real-world uses of AI to evaluate its role in decision-making. They assess the risks and benefits of AI tools, apply ethical reasoning, and develop strategies for using AI responsibly in academic or simulated professional settings.	Individuals apply ethical standards, regulatory guidelines and critical evaluation skills to AI use in workplace settings. They act as informed and responsible consumers of AI tools, assessing systems for fairness, accountability and social impact to ensure responsible and effective application in their fields.

Technical Skills

Technical skills are essential for all learners — not only those pursuing careers in computer science or AI development. These skills span a broad spectrum, beginning with foundational knowledge such as data literacy and programming, and advancing toward deeper understanding of artificial intelligence concepts and the technologies that allow machines to process language, images and sound.

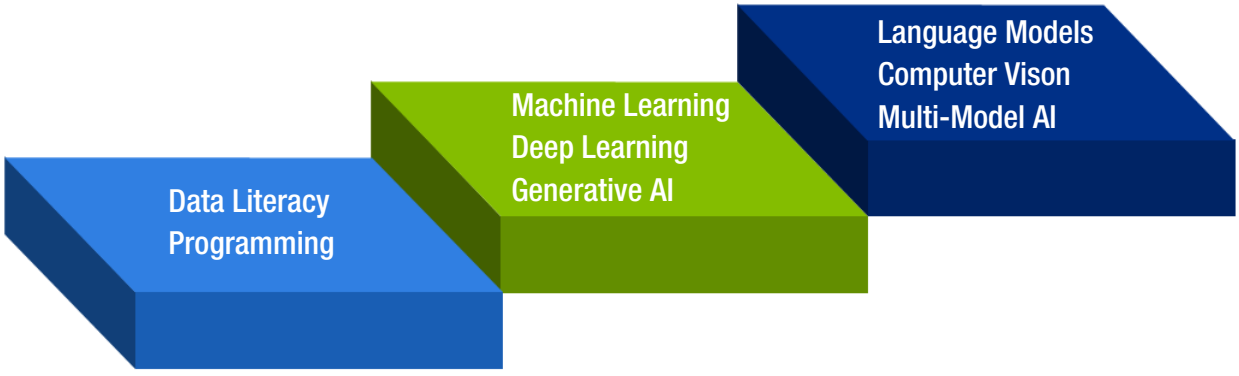
The goal is not for every learner to become a programmer or AI expert, but to ensure that individuals understand how data is collected, processed, and applied across industries. This understanding enables learners to become confident, effective users of technology in any career field.

Using the Awareness → Exploration → Application → Fluency progression, learners build technical skills over time and in varying degrees depending on their educational or professional context. Some individuals may begin with awareness of how algorithms work, while others may apply or demonstrate fluency in prompt engineering, AI tool integration, or data analysis. This flexible framework acknowledges that learners move at different paces and may reach different levels of proficiency across specific skill areas.

This progression includes three broad areas of technical skill development:

- **Data Literacy and Programming**: Foundational skills in understanding, interpreting, and using data, as well as recognizing how programming underpins modern technology solutions.
- **AI Fundamentals**: Core concepts such as machine learning, deep learning, and generative AI, helping learners understand how AI systems learn from data, recognize patterns, and produce new content.
- **AI-Enabled Technologies**: Tools that allow machines to simulate human capabilities, including large language models, computer vision, and multimodal systems that process diverse inputs such as text, sound, and images.

By embedding these skills across digital learning, core academics and CTE pathways, education and workforce leaders can ensure that all learners — regardless of career trajectory — are prepared to navigate, adapt to, and lead in a rapidly evolving, technology-driven world.



Technical Skills	Awareness Introduce and Build an Understanding of AI	Exploration Use and Investigate AI Tools	Application Apply and Evaluate AI	Fluency Demonstrate Expertise and Adaptability
Data Literacy Understanding how to collect, analyze, interpret and communicate data effectively in order to draw meaningful insights and make informed decisions.	Learners are introduced to basic data concepts through hands-on activities such as collecting simple information and organizing it into charts or graphs. They begin identifying patterns, comparing data points, and discussing what the data might show in familiar contexts.	Learners expand their skills by organizing and analyzing large sets of data. They use tools like spreadsheet software to sort, format and visualize information, and begin exploring how data can influence ideas, arguments or decisions.	Learners work on projects that require them to collect, clean and visualize data from real-world scenarios. They use analytical tools to draw conclusions, evaluate the accuracy of their sources, and communicate findings clearly and effectively.	Individuals apply data literacy to support decisions, optimize processes, and solve complex problems in academic or workplace environments. They validate results, extract insights from large data sets, and use evidence to guide strategy, ensure accuracy, and improve outcomes.
Programming Understanding fundamental programming concepts, including how data is used in programs, how instructions are structured, and how to troubleshoot when technology does not function as expected.	Learners explore the basics of programming through interactive activities and visual coding platforms such as Scratch. They learn to recognize how programs follow step-by-step instructions, identify simple patterns, and understand how data is processed by digital tools.	Learners work with block-based and introductory text-based coding environments to understand core programming structures such as loops, conditionals and variables. They begin troubleshooting basic issues and building simple programs that respond to user input or data changes.	Learners analyze how data flows through programs and evaluate algorithms in practical scenarios. Without requiring full coding proficiency, they identify inefficiencies, propose refinements, and consider how programming logic supports problem-solving in fields such as business, healthcare or engineering.	Individuals apply programming logic to troubleshoot systems, validate automated processes, and support technology operations in professional environments. They use computational thinking to understand how software interacts with data and ensure that tools and systems function as intended within their industries.

Technical Skills	Awareness Introduce and Build an Understanding of AI	Exploration Use and Investigate AI Tools	Application Apply and Evaluate AI	Fluency Demonstrate Expertise and Adaptability
Machine Learning Understanding how computers analyze data, recognize patterns, make predictions, and improve performance over time using techniques such as supervised, unsupervised, and reinforcement learning.	Learners explore how computers recognize patterns and make simple decisions based on data. Through relatable examples — like movie recommendations or image sorting — they begin to understand how AI systems learn from experience to improve performance.	Learners engage in hands-on activities to explore classification, prediction, and pattern detection. They experiment with simple models to observe how AI systems identify trends, adjust based on feedback, and increase accuracy over time.	Learners apply machine learning concepts to analyze real-world use cases. They assess how data is used to train models, examine potential sources of bias, and explore the ethical implications of AI-driven decision-making in fields such as healthcare, business and public services.	Individuals use machine learning tools to solve domain-specific problems. They design, test and refine models, evaluate outputs for accuracy and fairness, and ensure that machine learning applications align with ethical standards and regulatory requirements in their industry.
Deep Learning Understanding how computers use advanced neural networks with multiple layers to process large volumes of data, recognize complex patterns, and support increasingly accurate decision-making over time.	Learners are introduced to the idea that computers can learn from data in ways similar to how the human brain recognizes patterns. They explore simple examples, such as how AI identifies objects in images or suggests text, to understand how machines improve through repeated learning.	Learners explore the fundamentals of neural networks by interacting with simple models. They investigate how layered processing enables machines to refine predictions and begin to evaluate both the benefits and limitations of AI systems in making decisions.	Learners analyze how multi-layer neural networks process information to generate predictions or classifications. They experiment with AI tools, assess model performance, and examine issues such as fairness, accuracy and potential bias in AI-generated outputs.	Individuals apply deep learning technologies to solve complex, industry-specific problems. They evaluate model performance, interpret results, and apply best practices to ensure that deep learning tools are used effectively, ethically and responsibly in professional settings.
Generative AI Understanding how AI systems create new content — such as text, images, music and code — by learning from existing data and applying advanced algorithms, while recognizing potential errors, limitations and ethical considerations.	Learners are introduced to how computers generate content by recognizing patterns in existing data. They explore examples such as AI-created stories or images and begin to understand that while AI can create original outputs, it may also produce mistakes or unexpected results.	Learners interact with text, image and media-generation tools to explore how generative AI works. They begin identifying errors (such as hallucinations), discuss how training data affects outcomes, and consider how human input influences the quality of generated content.	Learners use generative AI to create and analyze content for academic or project-based work. They assess outputs for originality, accuracy, and bias, and consider ethical implications when using AI in creative, educational or professional scenarios.	Individuals use generative AI tools to enhance productivity, innovation, and decision-making in workplace environments. They refine outputs, evaluate reliability, and apply ethical reasoning to ensure responsible integration of AI-generated content into their field.

Technical Skills	Awareness Introduce and Build an Understanding of AI	Exploration Use and Investigate AI Tools	Application Apply and Evaluate AI	Fluency Demonstrate Expertise and Adaptability
Language Models Understanding how computers use natural language processing algorithms to analyze, generate, and comprehend human language, enabling applications such as translation, text generation, summarization, and conversational AI.	Learners explore how computers generate simple sentences, stories, or translations using language models. They begin to recognize that while AI can mimic human communication, it may produce errors or responses that are unclear or inaccurate.	Learners experiment with text generation and translation tools to understand how language models detect patterns and generate responses. They identify inaccuracies or inconsistencies in AI-generated language and begin examining how these tools process words and phrases.	Learners use language models to create, summarize, and translate text across academic and practical scenarios. They evaluate outputs for clarity, accuracy and bias, developing an understanding of how training data and prompts influence AI-generated content.	Individuals apply language models to enhance communication, streamline workflows, and support decision-making. They assess the reliability of AI-generated content, refine outputs for precision, and apply ethical considerations to ensure responsible and effective use in their field.
Computer Vision Understanding how computers use algorithms and neural networks to interpret and analyze visual information, enabling applications such as image recognition, object detection, and scene understanding.	Learners are introduced to how computers identify and categorize visual information. Through simple activities — such as recognizing shapes, colors, or objects — they explore the idea that AI systems "see" the world differently than humans and may misinterpret images.	Learners experiment with basic computer vision tools to train models for image classification and object detection. They explore how factors such as lighting, perspective, and training data affect accuracy and begin to investigate the limitations of machine-based visual analysis.	Learners apply computer vision concepts through hands-on projects in areas such as facial recognition, object tracking, and image classification. They assess model performance, examine common errors, and explore ethical considerations, including privacy, surveillance and potential bias.	Individuals use computer vision tools to interpret and analyze visual data in applied settings such as healthcare, security, manufacturing, or transportation. They evaluate system accuracy, refine insights, and apply ethical guidelines to ensure responsible and effective implementation.
Multi-Modal AI Understanding how AI systems process and combine different types of information — such as text, images, audio, and video — to improve decision-making and generate more accurate, meaningful responses. By integrating multiple data sources, multimodal AI enhances applications like virtual assistants, translation tools, and medical imaging, making AI more effective in real-world settings.	Learners are introduced to how AI uses different types of input to generate responses. Through simple examples — such as voice assistants that understand speech and respond with text, or tools that describe images — they begin to recognize how multiple data types can be combined to improve outcomes.	Learners experiment with AI applications that combine text, images, and audio, such as speech-to-text tools or automatic captioning systems. They explore how the quality of input data affects accuracy and discuss how AI connects and interprets different types of information.	Learners analyze how multi-modal AI systems operate in applications such as autonomous vehicles, assistive technologies, and advanced translation tools. They assess how AI integrates multiple inputs, evaluate its effectiveness, and consider limitations and ethical implications.	Individuals use multimodal AI tools to support communication, automation, and data interpretation in fields such as healthcare, logistics, or customer service. They assess system performance, ensure accurate synthesis of data sources, and apply ethical guidelines to support responsible use.

Call to Action

The time to act is now. As artificial intelligence and related technologies transform industries and daily life, all learners must begin building competencies across the full skills framework: success skills, industry baseline skills and technical skills. These competencies are not optional — they are essential for education, employment and civic participation in a technology-integrated world.

State leaders, education agencies, workforce development organizations, training providers and industry partners must take coordinated steps to embed these skills across K-12 systems, postsecondary institutions and workforce training programs. These efforts should not be seen as add-ons, but as integral to academic preparation, career advancement and lifelong learning.

To guide this work, the *Skills for an AI-Ready Workforce* framework provides a structured tool for evaluating current standards, curricula, and programs. The learning progression — Awareness, Exploration, Application and Fluency — can help identify where learners currently are and what supports are needed to work toward more advanced, adaptable uses of AI tools and concepts. This flexibility ensures that learners of all ages and backgrounds can find meaningful entry points into the material.

Importantly, this work must go beyond technical subjects. Core academic content — including English language arts, mathematics, science, social studies and the arts — must be updated to reflect how data, algorithms and automation affect both disciplinary learning and real-world application. Embedding AI-related skills across content areas helps learners understand the practical impact of technology in their personal and professional lives.

These competencies are not optional — they are essential for education, employment and civic participation in a technology-integrated world.

Many states are already updating their digital learning, computer science, and career and technical education frameworks. These efforts present a timely opportunity to align educational goals with the realities of the workplace. Graduate profiles, employability initiatives, and credentialing programs should be reviewed to reflect the increasing value of communication, leadership and problem-solving in AI-rich environments.

By using this framework as a planning and implementation tool, leaders can ensure that learners are not only able to use emerging technologies — but can understand, evaluate, and contribute to them in responsible, informed, and innovative ways. The future of work is already here. Our education and workforce systems must evolve together to prepare individuals for what comes next.

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Glossary

Algorithm
A set of step-by-step instructions that a computer follows to solve a problem or perform a task. Algorithms are the foundation of most computer programs and AI systems.

Anchor Standards
Broad, high-level expectations that outline essential skills such as collaboration, reasoning, and digital communication. Commonly used in K-12 education to guide curriculum across subjects and grade levels, these standards also inform postsecondary and workforce education by providing a unifying structure for aligning instructional goals, competencies, and skill development across disciplines.

Artificial Intelligence (AI)
The ability of computers or machines to perform tasks that typically require human intelligence, such as recognizing speech, solving problems, learning from data, and making decisions.

Bias (in AI)
When an AI system produces results that are unfair, inaccurate, or favor certain groups over others. Bias often stems from imbalanced or incomplete data used to train the AI.

Chatbot
A computer program that simulates conversation with users, often used in customer service or virtual assistance. Chatbots are powered by language models or simpler rule-based systems.

Competencies
Clearly defined sets of knowledge, skills and behaviors that learners are expected to demonstrate. Competencies often combine academic understanding with practical application and are used across education and workforce systems to guide instruction, training and assessment.

Computer Vision
A field of AI that enables computers to interpret and analyze visual information such as photos and videos. It is used in facial recognition, object detection, and automated image labeling.

Content Standards
Discipline-specific learning goals that define what students should know and be able to do in a particular subject, such as writing persuasive essays in English language arts or applying algebraic functions in mathematics.

Cross-Walk
A tool or process used to align different sets of standards, skills or frameworks. In this context, cross-walks help map AI-related skills to workforce competencies or educational standards to identify overlaps, gaps and opportunities for integration across systems.

Cybersecurity
The protection of computers, networks, and data from unauthorized access, attacks, or damage. It includes understanding how data is stored, shared, and secured.

Data
Information that can be collected, measured, and analyzed. In AI, data is used to train systems to recognize patterns, make decisions, or generate content.

Data Literacy
The ability to understand, interpret, analyze, and communicate data. This includes identifying patterns, evaluating sources, and using data to inform decisions.

Data Privacy
Practices that protect personal or sensitive information from being shared or used without permission. Data privacy ensures that individuals' information is handled responsibly.

Descriptors
Statements that define what learners should be able to do at each level of a skill progression. Descriptors focus on observable actions and outcomes, helping educators assess where learners are in their development and what supports they may need to move forward.

Deep Learning
A specialized type of machine learning that uses layered neural networks to process complex data such as images, speech, or large text sets. It powers applications like voice assistants and facial recognition.

Ethics (in AI)
The study and application of values such as fairness, transparency, accountability, and safety when designing and using AI systems.

Generative AI
AI systems that can create new content, like text, images, music, or code, by learning from large datasets. Examples include chatbots that write essays, tools that generate artwork, and platforms that assist with software development.

Hallucination (in AI)
When an AI tool produces information or responses that sound convincing but are false, misleading, or not based on real data.

Learning Progression
A structured developmental sequence used to guide instruction and training, showing how learners move from basic exposure to more advanced application. This report refers to four levels: Awareness, Exploration, Application, and Fluency.

Machine Learning
A type of AI where computers learn from data to make predictions or decisions without being explicitly programmed. It's the technology behind recommendations, voice recognition, and more.

Model (AI Model)
A program or system that has been trained to recognize patterns and make decisions or predictions based on data. Language models, for example, are trained to understand and generate human language.

Multi-Modal AI
AI systems that combine and process multiple types of input, like text, images, audio, and video, at the same time to improve accuracy and usefulness. Examples include voice assistants and tools that describe images.

Natural Language Processing (NLP)
The branch of AI focused on helping computers understand, interpret, and generate human language, whether spoken or written. NLP powers tools like translation apps, voice assistants, and chatbots.

Neural Network
A computing system inspired by the human brain that helps machines recognize complex patterns. Neural networks are used in deep learning for tasks like image recognition and language translation.

Pattern Recognition
The ability of an AI system to identify trends or repeated sequences in data. This helps AI tools make predictions or sort information effectively.

Process Standards
Standards that describe how students engage in learning — such as mathematical reasoning or scientific inquiry. These skills guide instructional practices across disciplines and often support interdisciplinary integration.

Programming

Writing instructions (called code) that a computer can follow. Programming allows people to build apps, websites, or AI systems.

Prompt
A question or instruction given to an AI tool to generate a response. In generative AI, the clarity and specificity of the prompt can significantly influence the output.

Prompt Engineering
The process of designing effective prompts to guide AI systems toward accurate and relevant results. This emerging skill is essential in both educational and workplace settings.

Reinforcement Learning
A type of machine learning where AI systems learn by trial and error. The system is "rewarded" for good outcomes and adjusts its behavior to improve over time.

Scaffold (in Skill Development or Standards Design)
A structured framework that outlines a logical sequence for building knowledge or skills over time. In this context, the AI learning progression — Awareness, Exploration, Application and Fluency — acts as a developmental scaffold that supports the thoughtful integration of competencies into educational standards, curricula or training programs. It helps ensure coherence and continuity in learning, regardless of when or how a learner enters the progression.

Supervised Learning
A machine learning method where the system is trained using labeled data — data that includes the correct answers — so it can learn to make accurate predictions.

Training Data
The collection of information used to teach an AI system how to recognize patterns, make decisions, or create content. The quality and scope of the training data influence the system's performance.

Transparency (in AI)
The degree to which the inner workings of an AI system can be understood and explained. Transparent AI makes it easier to identify errors, biases, or unexpected outcomes.

Unsupervised Learning
A type of machine learning where the AI system analyzes data without pre-labeled outcomes. It groups or organizes the data based on patterns it detects.

Upskilling
Providing additional training or education to help individuals gain new or advanced skills — especially in response to technological changes or evolving job roles.

Workforce Training Provider
An organization or institution that offers job-specific training, reskilling, or upskilling programs outside of traditional K-12 or higher education. These include employer-led programs, technical centers, and community-based providers.

Appendix: Integrating AI-Ready Skills into Academic and Workforce Programs

This appendix provides a step-by-step guide for education and training leaders — across K-12, post-secondary, and workforce systems — to integrate AI-related skills into academic standards, career and technical programs, and skills-based training initiatives. It supports planning using the *Skills for an AI-Ready Workforce* framework developed by the SREB Commission on AI in Education.

Because states, districts, and training providers work in different systems, this guidance is designed to be flexible. It recognizes that academic educators often revise standards and curricula, while training providers update skills and competency frameworks that support rapid upskilling or industry-specific training. This guide supports both approaches using a shared framework and progression model.

Clarifying Standards: Anchor, Process and Content

To support AI integration, it is important to understand the different types of standards that guide instruction and program design:

- **Anchor standards** (used in ELA and other disciplines) and process standards (used in math and other subjects) describe cross-cutting skills such as reasoning, collaboration, communication and digital fluency. These guide *how* students engage in learning and offer strategic entry points for integrating AI-related skills, especially those involving ethical reasoning, analysis and problem-solving.
- **Content standards** define *what* students or learners are expected to know and do in a given subject or training program, such as writing an argumentative essay or solving a geometric equation. These provide opportunities to connect AI-related knowledge and skills with academic content or industry-specific expectations.

Framework Overview: A Shared Language for AI Readiness

The AI-ready skills in this report are grouped into three categories:

- **Success Skills** — Transferable human-centered skills such as collaboration, adaptability, leadership and communication.
- **Industry Baseline Skills** — Foundational knowledge such as AI ethics, cybersecurity and data literacy.
- **Technical Skills** — Practical competencies in using, applying and evaluating AI technologies and tools.

These skills are scaffolded across four learning progression levels, which reflect a learner's exposure, confidence and adaptability in using AI:

1. **Awareness** – Understanding what AI is, where it appears in life and work, and how it affects people and systems.
2. **Exploration** – Interacting directly with AI tools or systems in guided ways.
3. **Application** – Using AI tools to complete tasks, solve problems or support decisions.
4. **Fluency** – Adapting confidently and responsibly to new tools, evaluating their outputs, and leading AI-integrated work.

Step 1: Build a Cross-Sector Team to Lead Integration

Start by assembling a team of stakeholders that reflects the full scope of your education and workforce system. This team should include:

- K-12 content specialists (such as ELA, math, science and social studies)
- Postsecondary faculty and academic program coordinators
- Career and technical education leaders
- Adult education and workforce training providers
- Industry and economic development representatives
- Digital learning and instructional technology experts

This team should begin by developing a shared understanding of the AI skills framework and progression levels. This shared language will support consistent decision-making and ensure that AI integration reflects both educational and industry relevance.

Step 2: Conduct an Audit of Standards and Skills Frameworks Using the AI Skills and Progressions

With the team in place, begin reviewing your current documents. For K-12 and postsecondary, this may include academic content standards and instructional frameworks. For training providers, this includes occupational skills frameworks, competency profiles or employer-aligned credentials.

The goal of this step is to intentionally map current learning goals to the AI skills framework, using both the skill groupings and learning progression levels.

For each standard or competency:

- Determine which of the **three AI skill categories** (success, industry baseline, technical) are already present or could be integrated.
- Identify the **current progression level** (Are learners just being introduced to AI concepts, or are they expected to use AI tools to complete tasks?).
- Note where gaps exist, or where enhancements could increase relevance, depth, or alignment with emerging workplace needs.

This step should be guided directly by the skill descriptors in this document, not general ideas about technology use. Integration is most effective when it is anchored in intentional skill development rather than tool exploration.

A sample audit format may look like this:

Learning Goal or Standard	Skill Catagory	Progression Level	Suggested Enhancements
Write arguments to support claims with evidence (ELA 9–10)	Success, Industry Baseline	Exploration	Use AI to support drafting and revision; evaluate AI output for bias and tone

Step 3: Identify Integration Opportunities and Connect to Workplace Use Cases

Once initial alignment is complete, focus on how each revised or enhanced standard can reflect real-world use of AI tools in industry and civic life.

Use this step to:

- Define *how* AI is used in the relevant discipline or job sector;
- Show educators and training providers *where* AI tools or skills are already being applied;
- Design sample classroom or training activities that mirror these professional applications.

This step is significant for educators who have limited exposure to AI workplace use cases and need concrete examples to support their learners, whether students or adults.

Crosswalk Format: Connecting Standard Types to Real-World AI Applications

Discipline	Standard Type	Example Standard	AI-Ready Integration	AI Skill Catgoery	Progression Level	Instructional Insight
ELA (Grades 9-10)	Anchor	Use technology to produce and publish writing and to interact and collaborate with others (CCSS.ELA-LITERACY.W.9-10.6)	Use generative AI tools to draft, revise, and receive feedback on writing collaboratively	Success Skill: Communication Technical Skill: Generative AI	Exploration → Application	Teaches collaborative tech fluency and ethical AI tool use
ELA (Grades 9-10)	Content	Write arguments to support claims with valid reasoning and relevant evidence (W.9-10.1)	Use AI to analyze argument structure and suggest evidence; evaluate AI-generated bias	Industry Baseline Skill: AI Ethics	Exploration	Reinforces critical thinking while leveraging AI tools
Math (Grades 8-9)	Process	Model with mathematics (CCSS.MATH.PRACTICE.MP4)	Use AI simulations or data visualizations to model real-world scenarios	Technical Skill: Data Interpretation	Exploration → Application	Supports conceptual learning and workplace-aligned problem-solving
Math (Grade 8)	Content	Understand and apply the Pythagorean Theorem (8.G.B.6)	Explore AI-powered geometry tools to model and solve spatial problems	Technical Skill: AI Simulations	Awareness → Use	Teaches collaborative tech fluency and ethical AI tool use

This format can also be adapted for CTE programs and workforce training curricula.

Step 4: Draft or Annotate Standards and Competencies with AI-Relevant Language

Once connections have been identified, revise your academic standards or training competencies to reflect the integration of AI-ready skills explicitly. This may include:

- Adding verbs and expectations that reflect AI use (for example, "analyze using AI tools," or "evaluate outputs from generative models")
- Emphasizing both technical fluency and ethical awareness (such as "identify potential bias in AI-generated content")
- Aligning depth of expectation with the progression levels (such as Awareness in early education, Application or Fluency in advanced or adult learning)

Examples of revised or annotated statements:

- "Use AI-based tools to support drafting, revision, and audience analysis in written communication."
- "Apply AI visualization tools to model statistical data and interpret outcomes with peer discussion."

For training providers, revising competency statements might look like:

- "Demonstrates ability to use AI-assisted scheduling software to optimize logistics."
- "Identifies ethical concerns when using AI to support decision-making in client interactions."

Step 5: Validate and Pilot With Target Audiences

Before finalizing new standards or competencies, test them in authentic learning or training environments:

- In K-12 or postsecondary, this may include curriculum pilots, teacher feedback sessions, or instructional walkthroughs.
- In workforce settings, training providers may conduct brief pilots with incumbent workers or job seekers and collect feedback on the clarity, relevance and applicability of skills.

Collect and analyze feedback to determine:

- Whether learners understand the skill being taught,
- Whether instructors or trainers feel confident teaching it,
- Whether the AI integration is realistic, relevant and adds value.

Use this feedback to refine your revised standards or frameworks before formal adoption.

Step 6: Finalize, Implement, and Build Support Infrastructure

Once revisions are complete:

- Ensure updates are reflected in public-facing frameworks, curricula, and instructional tools.
- Provide educators and training providers with professional learning opportunities aligned with the skills framework and progression levels.
- Share real-world use case examples and sample learning activities that demonstrate what integration looks like in practice.
- Develop ongoing evaluation tools (see Action 6 in the main report) to monitor the effectiveness of integration and assess whether learners are developing AI fluency.

This implementation phase is an opportunity to ensure that all systems, whether academic or workforce, are aligned toward the same outcome: equipping all learners with the skills to adapt, thrive and lead in an AI-integrated future.

SREB's AI in Education Commission

The Southern Regional Education Board Commission on Artificial Intelligence in Education was established to explore how AI can reshape education and prepare students for a technology-driven workforce. Chaired by South Carolina Gov. Henry McMaster, this two-year commission brings together leaders across SREB's 16 member states, including governors' offices, state education and workforce agencies, K-12 and postsecondary educators and industry experts.

Co-chaired by Brad D. Smith, president of Marshall University and former Silicon Valley CEO, the commission focuses on three core areas: developing policies to support the effective use of AI in K-12 and postsecondary education, using AI to enrich instructional practices, and ensuring students are equipped for emerging careers in AI and related fields. Through a series of meetings, committee discussions and expert consultations, the commission will produce actionable recommendations to advance the SREB region and the nation. These recommendations aim to support schools and institutions in adopting AI technologies that enhance education while building a future-ready workforce.

Commission Members

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Alan Baker, State Representative
Terri Collins, State Representative
Eric Mackey, State Superintendent of Education, Alabama State Department of Education
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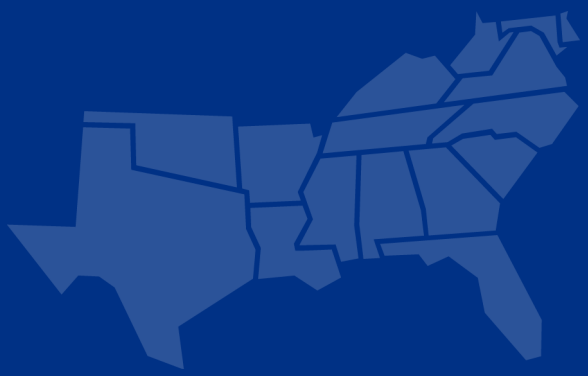

The Southern Regional Education Board works with states to improve education at every level, from early childhood through doctoral education and the workforce. An interstate compact and a nonprofit, nonpartisan organization based in Atlanta, SREB was created in 1948 by Southern governors and legislatures to advance education and improve the social and economic life of the region. SREB states are Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.