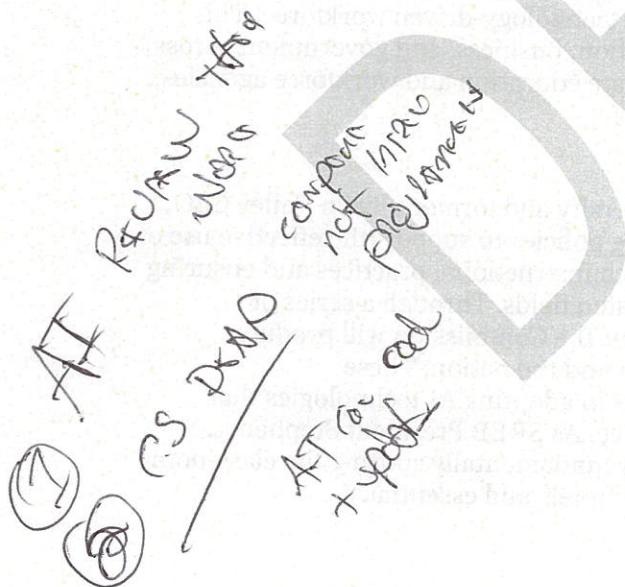


Skills for an AI-Ready Workforce



Introduction

As artificial intelligence (AI) continues to transform industries, it is essential that **all learners—students and adults alike—are equipped with the skills necessary to thrive in a technology-enhanced work environment.** These skills are no longer exclusive to those entering specific technical fields; rather, they are crucial for anyone navigating a technology-rich world. The *Skills for an AI-Ready Workforce* document, developed by SREB's AI Commission, provides education and workforce leaders, as well as state policymakers, with a roadmap to equip learners with competencies essential for adapting to the evolving technologies required for workplace advancement. This document outlines critical success, industry baseline and technical skills that all learners must acquire to adapt, innovate and thrive in environments where AI and automation play significant roles. By cultivating these skills, individuals will enhance their adaptability and develop capacities for complex problem-solving, ethical decision-making and effective collaboration—qualities that are increasingly valued as routine tasks become automated.

The *Skills* document is designed to help education leaders and state policymakers evaluate and update existing programs and frameworks, ensuring that **every learner** has access to opportunities that foster AI readiness. With structured learning progressions, this resource offers actionable guidance on embedding AI-related skills across K-12, postsecondary and workforce programs, beginning with awareness of foundational concepts in early education and advancing to high-level applications in secondary and workforce programs. By implementing these recommendations, leaders can help build an adaptive workforce prepared to harness AI's potential responsibly, effectively and ethically.

Overview of SREB's AI in Education Commission

The Southern Regional Education Board (SREB) Commission on Artificial Intelligence in Education, chaired by South Carolina Governor Henry McMaster, was established to explore how AI can reshape education and prepare students for a technology-driven workforce. This two-year commission brings together leaders from education, business, and government 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 will focus 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. As SREB President Stephen L. Pruitt noted, “We need to be proactive now, because AI is fundamentally shifting the classroom and the workplace,” making this collaborative effort both timely and essential.

Recommended Actions

These recommendations provide practical steps for state leaders, agency officials, educational leaders and workforce experts to implement the skills outlined in this publication. These actions support the development of essential skills across K-12, postsecondary and workforce programs, building a foundation for continuous learning and adaptability in a rapidly evolving job market.

1. Review and Align Existing Frameworks

Conduct a comprehensive review of existing educational and workforce frameworks to identify how the recommended AI-related skills align with current skills and competencies. Evaluate K-12 digital learning and computer science standards, graduate profiles and CTE programs to determine which of the Success, Industry Baseline and Technical Skills are already covered and where updates or new focus areas are needed.

2. Update Digital Learning and Computer Science Standards

Reevaluate digital learning and computer science standards to strengthen competencies related to data privacy, cybersecurity and AI ethics, as these areas have become increasingly critical in our region's technology-rich landscape. As technology advancements and updates occur rapidly, leaders should establish a new cycle for updating these standards to ensure that all learners are equipped with the most current and relevant skills.

3. Integrate Success Skills in Workforce and Employability Programs

Incorporate Success Skills—such as communication, leadership and adaptability—into both secondary coursework and workforce training programs. These skills are crucial for navigating a technology-enhanced work environment and are often found within existing graduate profiles and employability standards. Reinforce these skills as essential components of AI-readiness.

4. Collaborate with Industry and Business Leaders

Engage industry partners to gain insights into current and projected AI applications within specific fields. Use these insights to refine educational and workforce programs, ensuring that skills training is aligned with industry demands. Partnerships can also facilitate real-world learning experiences that enhance AI competency.

5. Provide Professional Development for Educators

Offer professional development opportunities focused on the integration of AI-related skills in classroom instruction and workforce training. Equipping educators with the knowledge and resources to teach these competencies will ensure that learners at all levels are exposed to and prepared for the demands of an AI-enabled workforce.

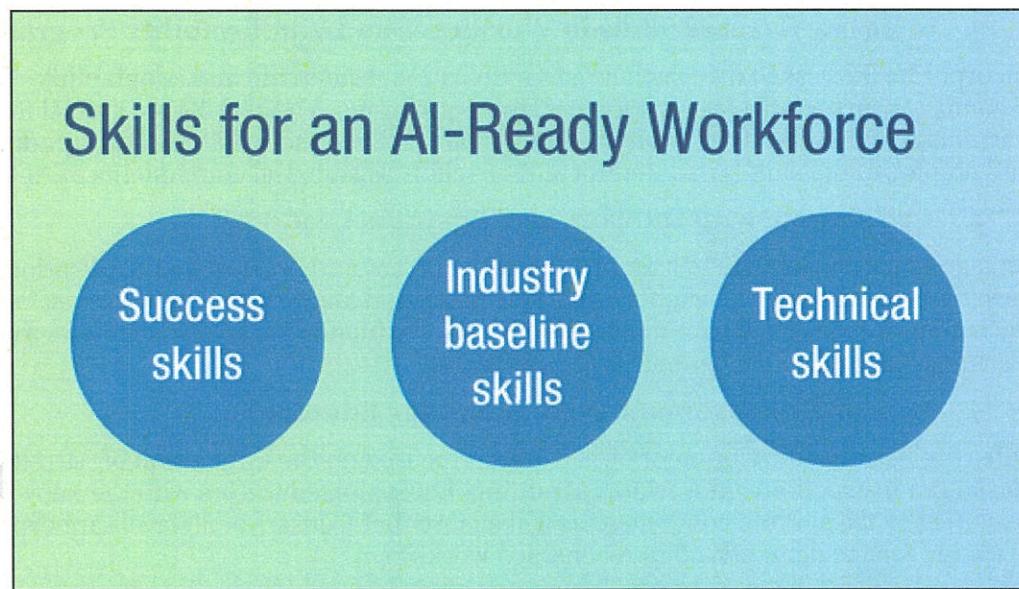
6. Establish Monitoring and Evaluation Mechanisms

Implement systems for tracking and evaluating the effectiveness of these updated standards and programs. By collecting data on skill development outcomes, leaders can make informed adjustments, ensuring that all learners have access to quality, AI-related education that evolves with industry needs.

Skills for an AI-Ready Workforce Overview

The Skills for an AI-Ready Workforce document, developed by the SREB AI Commission's Skill Development Subcommittee, provides a comprehensive framework for equipping learners with essential skills needed to succeed in a rapidly evolving, technology-driven and AI-integrated workforce. Grounded in extensive research and insights from industry leaders, the subcommittee identified three primary "buckets" of skills that will prepare individuals to navigate and thrive in the workforce of the future. These skills are designed not only to enhance workforce readiness but to ensure that learners can responsibly, creatively and effectively use AI and automation in various career fields.

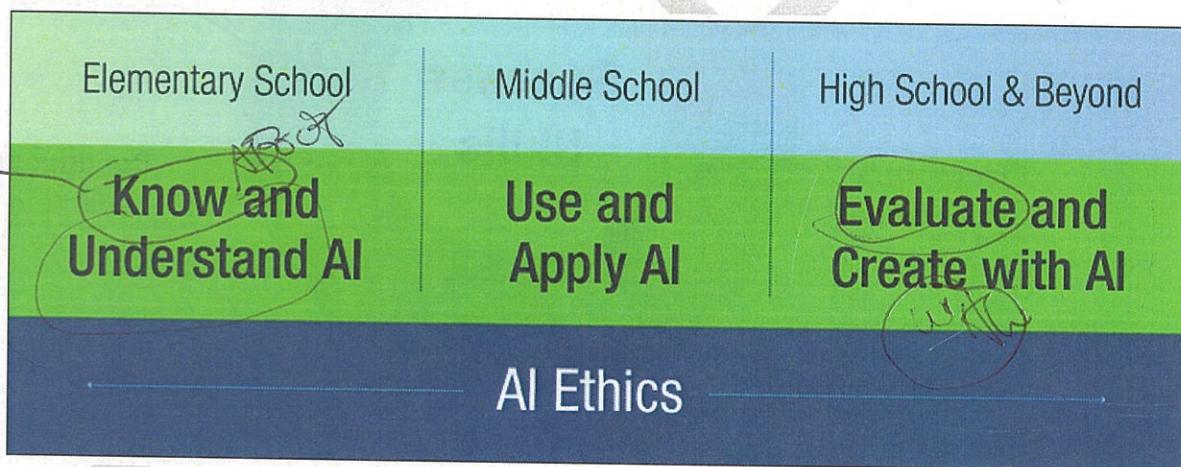
To shape these recommendations, the subcommittee conducted an in-depth review of workforce research, highlighting trends that reveal a growing need for skills that go beyond technical knowledge. The subcommittee collaborated closely with a focus group of business and industry leaders, who shared how AI is currently transforming their sectors and what technologies are projected to emerge in the coming years. This partnership allowed the subcommittee to tailor its recommendations to align with industry demands, focusing on the practical application of AI skills in real-world scenarios. Additionally, the team reviewed educational resources and frameworks already in place across SREB's member states, building on existing strengths while identifying gaps to address with new AI-specific competencies.



The three skill groups—**Success Skills**, **Industry Baseline Skills**, and **Technical Skills**—represent a holistic approach to AI readiness. Success Skills emphasize adaptable, transferable skills like communication, leadership and teamwork, which are vital as technology reshapes job roles and increases the demand for human-centered expertise. Industry Baseline Skills focus on foundational knowledge areas such as AI ethics, cybersecurity and domain-specific understanding, enabling learners to apply AI responsibly and effectively within diverse fields. Finally, Technical Skills cover the fundamentals of data literacy, programming and key AI technologies such as machine learning and computer vision. Together, these skill areas form a balanced foundation that prepares students and workers alike to engage and adapt to new technologies confidently and ethically and contribute meaningfully to an AI-enhanced world.

Skill Progressions

The skill progression graphic (below) illustrates a structured pathway for building AI readiness, starting from foundational awareness in elementary school and advancing through higher-level application and evaluation in secondary and postsecondary studies. In elementary grades, students begin by gaining awareness of AI tools and understanding how these tools gather and use data to make decisions. By middle school, this foundation expands as students learn to apply AI concepts, recognize potential inaccuracies or false positives, and start developing critical thinking around AI outputs. In high school and beyond, learners engage in deeper evaluation and creation with AI, assessing the accuracy of AI-generated results, identifying misinformation and understanding their role in producing reliable outcomes. This progression is anchored by a strong emphasis on AI ethics, ensuring that, at every stage, students understand and apply principles of responsible and ethical AI use. Insights from our business and industry focus group reinforced the importance of embedding ethical considerations consistently throughout this learning journey, underscoring that these competencies are essential across all levels of AI exposure and application.



Skill Descriptions and Sample Grade-Level Descriptors

Success Skills

Success skills are essential for thriving in today's evolving workforce and 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. Recognizing this, state leaders and educators are urged to prioritize these skills within career and technical education and workforce programs. By revising graduate profiles and embedding success skills in educational pathways, educators can ensure that learners continuously develop the resilience and flexibility needed to succeed in a rapidly changing job market.

Success skills are listed in priority order—with business and industry experts promoting the need for communication and leadership. In the future workplace, communication will be both

foundational and imperative, as future workers must not only engage AI tools through refined prompting but also support the effective use of results clearly with colleagues. As industries use AI and automation to replace rote tasks, leadership and project management skills will become increasingly important, equipping individuals to manage responsibilities and guide others in a technology-enhanced workplace. These competencies, along with teamwork and adaptability, empower learners to adapt, collaborate and continue learning as new technologies emerge. By cultivating these essential skills, educational programs help learners become valuable, future-ready employees who are capable of advancing and leading in an AI-integrated world.



| Success Skill | Elementary School Know and Understand AI | Middle School Use and Apply AI | High School and Beyond Create with or in AI |
|--|--|---|--|
| Communication Skills Proficiency in conveying technical and non-technical information effectively to diverse audiences in both written and oral formats. | Practicing basic communication skills through storytelling, show-and-tell, and simple presentations. Emphasis is on clear expression and understanding of different forms of communication. | Working on more formal presentations, learning to explain both technical and non-technical information clearly. Students begin to understand their audience and tailor their communication accordingly. | Refining communication skills to include detailed explanations of complex ideas, including AI concepts. Students learn to engage with diverse audiences, from peers to professionals. |
| Leadership and Project Management Skills in planning, executing and managing projects with a strong emphasis on ethical decision-making and leadership. | Beginning to understand the basics of leadership and project management through simple class projects. Students practice taking initiative, organizing tasks and making fair decisions. | Taking on more responsibility in managing projects. Students learn to plan, delegate tasks and make decisions while considering ethical implications and reflecting on their leadership experiences. | Developing comprehensive leadership and project management skills. Students plan, execute and oversee complex projects, focusing on ethical decision-making and effective leadership. |
| Collaboration and Teamwork Ability to work effectively in teams, communicate ideas clearly and collaborate on projects. | Learning to work in small groups on simple projects, practicing sharing ideas and listening to others. Students develop self-awareness by recognizing their strengths and contributions while understanding and respecting the emotions and perspectives of their peers. | Engaging in more structured team projects that require planning, role assignment and collective problem-solving. Students learn to articulate their ideas clearly, manage their own emotions, and appreciate differing viewpoints, fostering empathy and cooperation. | Participating in complex projects involving interdisciplinary collaboration and AI tool integration. Students develop advanced communication and teamwork skills, preparing for real-world scenarios. |
| Critical Thinking Ability to analyze complex problems, discern the integrity of data and develop innovative solutions. | Introducing students to basic problem-solving tasks that encourage them to ask questions, explore solutions and assess the reliability of information through puzzles, experiments and storytelling, helping them analyze situations and validate the credibility of sources and outcomes. | Engaging students in more structured problem-solving activities, such as science projects and debate clubs, where they analyze information, evaluate evidence, assess the credibility of sources and develop reasoned conclusions. | Tackling complex, real-world problems through project-based learning, research projects and advanced coursework, where students develop innovative solutions and critically assess both their effectiveness, and the integrity of the data and information used. |

| Success Skill | Elementary School Know and Understand AI | Middle School Use and Apply AI | High School and Beyond Create with or in AI |
|--|--|--|---|
| Problem Solving Capability to approach problems logically and creatively. | Finding solutions through simple problem-solving exercises and games that teach logical thinking and basic strategies. Examples include math puzzles, classroom challenges and cooperative games. | Working on more complex problems that require a combination of logical and creative thinking, such as designing simple inventions or solving community issues through group projects. | Involving multidisciplinary approaches and advanced problem-solving tasks, including engineering projects, coding challenges and business simulations. Students learn to approach problems from different angles and develop comprehensive solutions. |
| Adaptability Flexibility to adapt to new technologies and changing environments. | Introducing new tools and technologies in a controlled environment, allowing students to explore and adapt to changes in a fun and supportive setting. Activities include using educational apps and learning through interactive tools. | Encouraging students to adapt to new learning environments and challenges, such as transitioning between subjects and using various digital tools for research and presentations. | Preparing students for post-secondary education and careers by exposing them to diverse technologies, collaborative platforms and dynamic projects that require flexibility and quick adaptation to new information and tools. |
| Continuous Learning Continuous learning mindset to keep up with evolving AI technologies and methodologies. | Fostering a love for learning through curiosity-driven activities, such as exploring new topics, participating in reading programs, and engaging in interactive learning games. | Promoting a growth mindset by encouraging students to take on challenges, reflect on their learning processes, and set personal goals for improvement. Activities include self-paced learning modules and reflective journaling. | Instilling a continuous learning mindset through advanced coursework, extracurricular activities and independent study projects. Students are encouraged to pursue certifications, online courses and other opportunities for lifelong learning. |
| Creativity Ability to generate new and original ideas, approaches, and solutions by thinking outside the conventional framework. | Nurturing creativity through art projects, imaginative play and creative writing. Students can express themselves and explore new ideas in a supportive environment. | Providing structured opportunities for creative thinking, such as design challenges, creative problem-solving tasks and collaborative projects that require innovative solutions. | Encouraging creative expression through advanced art classes, innovation labs and entrepreneurial projects. Students are challenged to think outside the conventional framework and develop original ideas and solutions. |

Industry Baseline Skills

In today's technology-driven workforce, **Industry Baseline Skills** are essential for equipping students and adults with the knowledge to effectively engage with both current and emerging technologies. As job roles evolve due to advances in AI and automation, these foundational skills—such as core academic knowledge, domain knowledge, AI ethics, cybersecurity, data privacy and responsible use of AI—become increasingly critical. A strong grasp of domain-specific knowledge allows individuals to apply AI tools within their chosen fields accurately and responsibly, while ethical and security considerations ensure they use these technologies in ways that respect privacy and rights. Mastering these industry baseline skills enables individuals to adapt to new developments, enhance their employability and advance in their careers.

These skills function like interconnected “cogs in a wheel,” working together to provide learners with a comprehensive foundation for responsible technology use. Core academic skills in math, science, social studies and language arts remain essential, as they underpin a deeper understanding of AI’s capabilities and ethical implications. For instance, students applying AI in fields like healthcare or environmental science must grasp underlying principles—whether it’s understanding patient data in medicine or analyzing ecological trends. AI ethics and responsible use, guided by concepts of personal rights and responsibilities, empower learners to make informed decisions about when and how to use AI. By incorporating these skills into career and technical education (CTE) courses, updating computer science standards and embedding them in graduate profiles, educators and state leaders can ensure that learners are not only exposed to these concepts but can apply them meaningfully across real-world contexts.

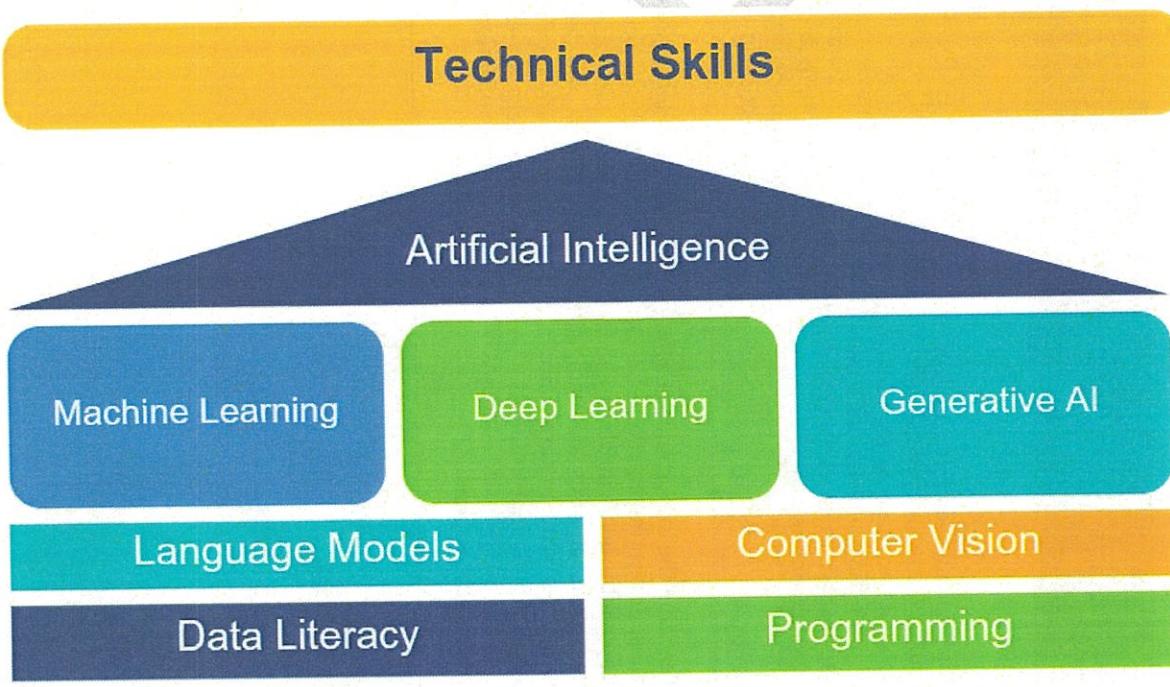
| Industry Skill | Elementary School Know and Understand AI | Middle School Use and Apply AI | High School and Beyond Create with or in AI |
|--|---|--|--|
| | Create with or in AI | | |
| Core Academic Skills Encompassing the foundational knowledge and competencies in subjects like math, science, social studies, and language arts. These skills support a learner's ability to understand, communicate, and solve problems across diverse fields, enabling them to interact effectively with AI and other technologies. | Building fundamental competencies in math, science, reading, and writing, engaging students in basic exercises that connect these subjects to technology and everyday applications. | Strengthening core academic skills through interdisciplinary projects that incorporate technology and data, students engage in activities requiring them to apply math and science to real-world situations—such as analyzing simple data sets or conducting experiments—while also exploring historical or current events to understand technology's impact on society. | Applying advanced academic skills in complex, real-world scenarios that integrate math, science, language arts, and social studies into AI-related projects—such as data analysis, scientific research, critical essays on technological impacts, or case studies on AI ethics—to deepen conceptual understanding and develop the ability to interpret, critique and communicate effectively in a technology-driven world. |
| Domain Knowledge Possessing expertise and understanding in specific fields or industries, which enables the practical application and adaptation of AI technologies to address unique challenges and opportunities within those domains while exploring career opportunities and the uses of AI across various career fields beyond computer science and information technology. | Providing exposure to different fields through simple projects and activities, inviting guest speakers, or organizing virtual tours showcasing various industries help students gain a basic understanding of how different professions use technology, including AI. | Engaging students in focused projects that require knowledge from specific fields, organizing collaborative activities addressing industry-specific challenges, and exploring career opportunities where AI is used to help students understand how AI applies to various professions beyond traditional tech roles. | Assigning advanced projects that require in-depth knowledge of specific industries, facilitating internships or partnerships with local businesses for real-world experience, and encouraging the development of AI-driven solutions to industry-specific problems help students explore diverse career opportunities and understand how technology is transforming various fields. |
| AI Ethics Understanding and applying ethical and legal principles to the development and deployment of AI technologies, ensuring fairness, transparency and accountability while minimizing harm and bias. | Introducing fairness and integrity through simple activities, discussing the importance of honesty, and using everyday examples to illustrate ethical behavior help students learn the basics of ethical conduct. | Presenting ethical dilemmas and discussions on fairness, exploring transparency and accountability through projects, and studying ethical issues in technology and media via case studies help students understand more complex ethical principles and the basic legal implications of AI use. | Conducting in-depth studies of ethical principles in AI and technology, analyzing real-world scenarios that require ethical decisions, and developing guidelines for ethical AI development and deployment allow students to apply their understanding to both practical and theoretical situations, including a deeper exploration of the legal frameworks governing AI use. |

| Industry Skill | Elementary School Know and Understand AI | Middle School Use and Apply AI | High School and Beyond Create with or in AI |
|--|--|---|---|
| | Cybersecurity and Data Privacy | Responsible AI | |
| <p>Cybersecurity and Data Privacy</p> <p>Understanding cybersecurity principles and practices to protect data and AI systems from threats, with a strong emphasis on safeguarding personal privacy and personal data.</p> | <p>Introducing the basic concepts of online safety and privacy helps students learn about the importance of protecting personal information and teaches them simple practices to stay safe online.</p> | <p>Teaching the importance of safety rules, promoting trust and responsible behavior through classroom activities, and using stories and role-playing to emphasize responsibility help students understand the basic concepts of responsible actions.</p> | <p>Developing a deeper understanding of advanced cybersecurity principles and practices. Students learn to identify and mitigate various cyber threats, understand cybersecurity's ethical and legal aspects, and explore the tools and techniques used to protect data and AI systems. Emphasis is placed on personal privacy and the responsible handling of personal data.</p> |
| | | | <p>Exploring regulatory standards and societal values in detail, studying case studies on responsible AI use, and developing projects that align with ethical and regulatory guidelines. Students gain a comprehensive understanding of responsible AI implementation.</p> |

Technical Skills

Technical Skills are essential for all learners, not just those pursuing careers in computer science or AI design. These skills form a structured progression, starting with foundational knowledge in data literacy and programming, and advancing to specialized AI tools. The goal is not for every learner to become a programmer or data scientist but to ensure they understand how data is collected, processed and utilized in current and emerging technologies, ensuring that today's learners are also efficient users of these technologies.

This progression can be visualized as the "framework" of a house, where each level builds on the previous one. The foundation begins with data literacy and programming, equipping learners with a fundamental understanding of how data flows through digital systems and the basic elements of programming. The next layer introduces language models and computer vision, allowing students to see how computers gather, interpret, and process data similarly to how humans gather information through their senses. The top tier of the house introduces students to key AI subsets, progressing from machine learning to deep learning with large data sets, and culminating in generative AI. By embedding this comprehensive skill set into digital learning and CTE frameworks, state leaders and educators can ensure that learners at all levels are prepared to adapt to and lead in an AI-enhanced workforce.



| Technical Skill | | Elementary School Know and Understand AI | Middle School Use and Apply AI | High School and Beyond Create with or in AI |
|--|--|--|--|---|
| Data Literacy <i>Introduction to Data Literacy</i> | Understanding how to collect, analyze, interpret and communicate data effectively, enabling informed decision-making and drawing meaningful insights from data. | Teaching basic data collection and organization skills through classroom projects, using charts and graphs to visualize simple data sets, and encouraging students to interpret and discuss their findings. | Expanding data literacy by teaching data preprocessing and analysis techniques, using spreadsheet software to handle larger data sets, and introducing basic data visualization tools to create more complex visual representations. | Developing advanced skills in data collection, preprocessing, analysis and visualization, engaging in projects that require comprehensive data handling and interpretation, and preparing for industry-recognized certifications in data science and analytics. |
| Programming <i>Computer Science</i> | Understanding the fundamental concepts of coding and programming. | Introducing basic coding concepts through visual programming tools like Scratch, engaging students in simple programming activities, and fostering logical thinking through games and puzzles. Students will understand the basics of how coding works without writing code. | Expanding programming knowledge by introducing text-based coding languages such as Python. Students will learn the foundational programming concepts, including loops, conditionals and variables. | Developing a deeper understanding of coding concepts and their application in various fields. Students will be exposed to more complex projects involving coding and data analysis, with an emphasis on understanding the logic and structure of code rather than developing proficiency. |
| Machine Learning <i>Computer Science</i> | Understanding how computers use supervised, unsupervised and reinforcement learning algorithms to analyze and learn from data to recognize patterns, make predictions and improve performance over time through experience and iterative training on diverse datasets. | Introducing students to machine learning by exploring how computers can learn from data to recognize patterns and make simple decisions. | Exploring key machine learning concepts by experimenting with data to help students see how algorithms and models can be used to classify and predict outcomes. | Creating and evaluating machine learning models, applying advanced concepts and assessing the performance and ethical implications of their work. |
| Deep Learning <i>Computer Science</i> | Understanding how computers use advanced neural networks with multiple layers to learn from vast amounts of data, enabling them to recognize complex patterns and improve decision-making and performance over time. | Introducing students to deep learning by exploring how computers can learn complex patterns from data, similar to how the human brain processes information. | Exploring basic deep learning concepts by working with simple neural networks. Students will understand how layers of processing can improve the accuracy of predictions and classifications. | Building and evaluating deep learning models and experimenting with neural networks. Students will learn to solve complex problems while assessing their effectiveness and ethical considerations. |

| Technical Skill | Elementary School Know and Understand AI | Middle School Use and Apply AI | High School and Beyond Create with or in AI |
|--|--|---|---|
| | Create with or in AI | | |
| Generative AI Understanding how AI systems can create new content, such as text, images, music and code by learning from existing data and using advanced algorithms to generate unique outputs and recognize errors or biases in AI-generated products. | Introducing students to generative AI by showing how computers can create content like simple stories or images based on patterns learned from examples. Students will begin to recognize that AI can sometimes make mistakes or produce unexpected results. | Exploring basic generative AI concepts by experimenting with tools that generate content such as text or images. Students will learn to identify and discuss errors (hallucinations) and consider how biases in the data might affect the AI-generated content. | Building and experimenting with generative AI models, creating original content and analyzing the results. Students will assess the quality, originality and potential biases in the generated content and understand the ethical considerations of using AI in creative processes, including the impact of data biases and the occurrence of hallucinations. |
| Language Models Understanding how computers use algorithms in natural language processing to analyze, generate and comprehend human language, enabling tasks such as translation, text generation and conversational AI. | Introducing students to language models by exploring how computers can understand and generate simple sentences, mimicking basic human communication. | Exploring language models by experimenting with basic text generation and translation tools and learning how computers process and produce language. | Creating and evaluating language models, and developing projects that involve generating, summarizing or translating text while considering the accuracy will help students learn the ethical implications of their outputs. |
| Computer Vision Understanding how computers use algorithms and neural networks to interpret and analyze visual information from the world, enabling tasks such as image recognition, object detection and scene understanding. | Exploring how computers can recognize and categorize simple images, such as identifying shapes or objects in pictures, will introduce students to computer vision. | Using basic tools to train models that can classify images or detect objects, students will experiment with computer vision and learn how machines interpret visual data. | Building and evaluating computer vision models, developing projects that involve object detection or image classification, and assessing the accuracy and potential applications of their work will help students gain practical experience in this field. |

Call to Action

As artificial intelligence transforms our economy and reshapes job roles across industries, it is crucial that we take immediate, proactive steps to equip **all learners** with the skills necessary to thrive in a technology-rich work environment. We cannot afford to wait; developing these competencies now will help our workforce remain competitive and adaptable as technology continues to evolve. We urge state leaders, agency heads, educational leaders and workforce development experts to review the skill recommendations in this publication and identify strategic actions to accelerate the embedding of these skills across programs.

As you review the Success Skills, Industry Baseline Skills, and Technical Skills "buckets," consider the ways your current educational and workforce programs align with these competencies. For example, Success Skills—often emphasized in graduate profiles or employability training—are already valued as core capabilities by industry leaders. Likewise, Industry Baseline and Technical Skills frequently appear in computer science or digital learning standards, many developed in 2018 and may be due for updates to reflect the latest emphasis on data privacy, cybersecurity and AI ethics. By assessing your programs and identifying priority areas for enhancement, you can play a critical role in equipping the workforce of tomorrow with vital AI-related competencies.

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