CDE | COLORADO
Department of Education

Essential Skills Guidance

Standards Review and Revision Committee Resource Developed by:
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Purpose of the Essential Skills Guidance Resource

Colorado passed legislation in 2008, Senate bill 08-212, that requires Colorado public preschool through elementary and secondary education standards shall ensure that, in addition to measuring a student's subject matter knowledge, the standards, to the extent practicable, will require a student to develop and demonstrate **creativity and innovation skills**; c**ritical-thinking and problem-solving skills**; **communication and collaboration skills**; **social and cultural awareness**; **civic engagement**; i**nitiative and self-direction**; **flexibility**; **productivity and accountability**; **character and leadership**; **THE ABILITY TO USE INFORMATION AND COMMUNICATIONS TECHNOLOGIES TO FIND, EVALUATE, CREATE, AND COMMUNICATE INFORMATION** (all caps denotes amendment by HB 17-1184); and other skills critical to preparing students for the twenty-first-century workforce and for active citizenship. C.R.S. 22-7-1005 (2016). During the 2008-10 standards development process, these skills were referred to as "21st Century Skills".   Development of these skills begins at birth and is continuous and cumulative, crossing students' age and developmental phases.   They are skills that provide the strong foundation and ongoing support for success in school and throughout life. Moving forward, the department is proposing that these skills will be referred to as "Essential Skills" and provide a common understanding and approach across all content areas involved in the standards review and revision process.

Goals of Guidance Document

The Essential Skills Guidance Resource document was developed by a cross-unit team of specialists at CDE to provide guidance for the standards review and revision process by aligning state initiatives that span a continuum from school readiness to post-secondary and workforce readiness. The general idea of the guiding principles is to clearly articulate what the essential skills are in statute and to help educators consider many ways elements of these skills could manifest beginning in early childhood through post-secondary pursuits. Developmentally appropriate support for these skills should occur in all subject areas. Understanding the importance of these skills is the first step in achieving life-long success for all students.

School Readiness, Postsecondary and Workforce Readiness, 21st Century Skills, Early Learning and Development Guidelines

Aligned Skills P - 12

2008-2011 Initiatives

2018 Standards Revision

Essential Skills: Colorado Talent Pipeline Report

Ensuring students are prepared and have the in-demand skills to enter the workforce is an essential strategy to meeting needs of employers in Colorado. At the secondary level, the goal is for all students to understand and articulate their individual skillset, how they relate to potential careers and jobs, and graduate from high school with these in-demand skills. Colorado industry representatives are clear that students who graduate from high school and seek to work in Colorado need in-demand skills that meet business, industry, and higher education standards. Aligned high school graduation expectations are intended to be a roadmap to help students and their families plan for success after high school by demonstrating their knowledge, skills, and abilities to enter the workforce, military, or higher education without significant training or remediation (CWDC, 2016).

Clearly, graduating from high school with the competencies needed for future success is critical for all students. A discussion among statewide participants from business and industry, education, non-profit organizations, and government sectors developed a description of Postsecondary and Workforce Readiness (PWR) in Colorado that was approved by both the State Board of Education and the Commission on Higher Education. The work group also identified core skills that are necessary to successfully enter the workforce or educational opportunities beyond high school. The group's findings align well with skills that most frequently appear in real-time job postings—each of the top 10 skills listed in job postings are included in this document (CWDC, 2016).

Purpose of the Essential Skills Guidance Resource (cont.)

The essential skills described in statute support Colorado students in achieving the goals established with the essential skills (previously known as 21st century skills). Updated skills were identified and described by hundreds of education, community and business leaders in the spring of 2016, and are an integral part of the Colorado Talent Pipeline Report. This guidance resource was developed by ensuring both the statutory skills and the talent pipeline report skills were included and defined for a common understanding. Standards review and revision committees will use this resource throughout the review and revision process.

Developmental Milestones

EMERGING EXPERT

STRATEGIC LEARNER

ADVANCED BEGINNER

NOVICE

The essential skills are not "locked in" by grade level since new learning, regardless of age/grade often starts at a novice/beginner level. The guiding principles for each of the four key categories are a listing of the skills Colorado graduates should demonstrate (**Entrepreneurial, Personal, Civic/Interpersonal, Professional**).

As students progress throughout their pre-K-12 education experience, they acquire these skills through a developmental approach. This approach was derived from the model of novice-to-expert skill acquisition (Dreyfus & Dreyfus, 1980, 2005). "The Dreyfus model of skill acquisition describes changes in skill performance as moving from reliance on rules, to analysis, toward intuition based on past experience." (Maine Department of Education (n.d.), p.iii).   [i]The Dreyfus model delineates five stages of development: Novice, Advanced Beginner, Competent, Proficient and Expert.

"This model reflects changes over years of active engagement and learning by doing including learning from failure".[ii] (Maine Department of Education (n.d.), p.iii). For the pre-K-12 purpose of this guidance document, the developmental stages have been modified using the four milestones derived from the *Maine Guiding Principles* document of **Novice**, **Advanced Beginner**, **Strategic Learner**, and **Emerging Expert** in recognition of the continued development that occurs beyond the pre-K–12 system and learners' increased growth and learning throughout adulthood.

Entrepreneurial Skills[iii]

A Colorado graduate demonstrates entrepreneurial skills through critical thinking and problem solving, creativity and innovation, inquiry and analysis, and risk taking. A student with these skills can:

	Novice	Advanced Beginner	Strategic Learner	Emerging Expert
Critical Thinking/ Problem Solving	• Recognize that problems can be identified and possible solutions can be created	• Define the problem using a variety of strategies	• Make connections between information gathered and personal experiences to apply and/or test solutions	• "Interpret information and draw conclusions based on the best analysis" (The Partnership for 21st Century Skills (2009), p. 21)
Creativity/ Innovation	• Demonstrate curiosity, imagination and eagerness to learn more	• Build on personal experience to specify a challenging problem to investigate	• Engage in novel approaches, moves, directions, ideas, and/or perspectives	• Synthesize ideas in original and surprising ways
Inquiry/ Analysis	• Recognize and describe cause-and-effect relationships and patters in everyday experiences	• Investigate to form hypotheses, make observations and draw conclusions	• Test hypotheses/prototype with planned process for getting feedback	• Make predictions and design data/information collection and analysis strategies
Risk Taking	• Demonstrate a willingness to try new things	• Demonstrate flexibility, imagination, and inventiveness in taking on tasks and activities	• Innovate from failure, connect learning across domains, and recognize new opportunities	• Act on creative ideas to make a tangible and useful contribution

Personal Skills [iv]

A Colorado graduate demonstrates personal skills through self-awareness, initiative and self-direction, personal responsibility and self-management, adaptability and flexibility, and perseverance and resilience. A student with these skills can:

	Novice	Advanced Beginner	Strategic Learner	Emerging Expert
Self-Awareness	• Accurately recognize one's own emotions, thoughts, and values and how they influence behavior	• Appropriately express one's own emotions, thoughts, and values and identify how they influence behavior	• Assess personal strengths and limitations, with a well-grounded sense of confidence, optimism, and a 'growth mindset'	• Adapt to environments with appropriate emotions and behaviors, demonstrating personal awareness through the development of positive relationships
Initiative/ Self-Direction	• Recognize personal characteristics, preferences, thoughts, and feelings	• Pursue opportunities to engage and learn interests	• Apply knowledge to set goals, make informed decisions and transfer to new contexts	• Take responsibility for and pursue opportunities
Personal Responsibility	• Handle impulses and behavior with minimal direction	• Discern differences of effective and ineffective processes, communication and tasks	• Regulate one's emotions, thoughts, and behaviors in different situations	• Develop, plan, and organize self-behavior
Adaptability/ Flexibility	• Recognize emotional response to ideas that differ from own	• Regulate reactions to differing perspectives	• Look for and value in different perspectives expressed by others	• Demonstrate ways to adapt and reach workable solutions
Perseverance/ Resilience	• Resist distractions, maintain attention, and continue the task at hand through frustration or challenges	• Set goals and develop strategies to remain focused on learning goals .	• Focus on learning goals by employing motivation and familiar strategies for engagement and evaluate progress, making necessary changes to stay the course	• Work effectively in a climate of ambiguity and changing priorities

Civic/Interpersonal Skills [v]

A Colorado graduate demonstrates civic/interpersonal skills through collaboration and teamwork, strong communication skills, global and cultural awareness, civic engagement and strong character.   A student with these skills can:

	Novice	Advanced Beginner	Strategic Learner	Emerging Expert
Collaboration/ Teamwork	• Recognize how personal actions have had a positive or negative impact with feedback as needed	• Recognize how members of a community rely on each other, considering personal contributions as applicable	• "Follow a process identified by others to help generate ideas, negotiate roles and responsibilities, and respects consensus in decision making" (Maine Department of Education (n.d.), p.22).	• Use interpersonal skills to learn and work with individuals from diverse backgrounds
Communication (using information and communications technologies)	• Articulate personal strengths and challenges using different forms of communication to express themselves	• Consider purpose, formality of context and audience, and distinct cultural norms when planning content, mode, delivery, and expression	• "Establish goals for communication and plan out steps accordingly" (Maine Department of Education (n.d.), p.3).	• Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts (including multi-lingual)
Global/ Cultural Awareness	• Compare attitudes and beliefs as an individual to others	• Identify and explain multiple perspectives (cultural, global) when exploring events, ideas, issues	• Plan and evaluate complex solutions to global challenges that are appropriate to their contexts using multiple disciplinary perspectives (such as cultural, historical, and scientific)	• Apply knowledge and skills to implement sophisticated, appropriate, and workable solutions to address complex global problems using interdisciplinary perspectives independently or with others
Civic Engagement	• Identify and reflect upon personal connections to community systems	• Connect knowledge (facts, theories, etc.) from personal ideas/understandings to civic engagement	• Participate in social or community activities	• "Participate effectively in civic life" (The Partnership for 21st Century Skills (2009), p. 2)
Character	• Demonstrate an understanding of cause and effect related to personal decisions	• State a position and reflect on possible objections to, assumptions and implications of the position	• Apply ethical perspectives/ concepts to an ethical question/ situation/ scenario	• "Apply a fundamental understanding of the ethical/legal issues in many context including the access and use of information" (The Partnership for 21st Century Skills (2009), p. 5)

Professional Skills ^{vi}

A Colorado graduate demonstrates professional skills through task and time management, career awareness, information literacy, productivity and accountability, self-advocacy, and leadership.   A student with these skills can:

	Novice	Advanced Beginner	Strategic Learner	Emerging Expert
Task/ Time Management	• Articulate task requirements and identify deadlines	• Develop and utilize basic task and time management strategies effectively	• Demonstrate task management attributes associated with producing high quality products including the abilities to: ○ Work positively and ethically ○ Manage time and projects effectively ○ Multi-task ○ Clearly communicating with others	• Set personal goals and take responsibility for those goals through reflection upon prior outcomes
Career Awareness	• Ask questions and learn more about careers and other life pursuits	• Connect careers and other life pursuits to personal interest	• "Pursue a path of inquiry initiated by personal connections to careers and other life pursuits" (Maine Department of Education (n.d.), p.26).	• Demonstrate knowledge, understanding, and personal awareness of how their dreams and interests translate into career fulfillment and career pathways available in local, regional, national and global arenas
Information Literacy	• Identify key attributes of a variety of information products (e.g., books, newspapers, online or print articles, social media)	• Articulate the most effective options to access information needed for a specific purpose	• "Examine how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors" (The Partnership for 21st Century Skills (2009), p. 5)	• "Analyze both how and why media messages are constructed, and for what purposes" (The Partnership for 21st Century Skills (2009), p. 5) and use information accurately, ethically, and creatively for the issue or problem at hand
Use Information and Communications Technologies	• Find information through the use of technologies	• Communicate information through the use of technologies	• Evaluate information through the use of technologies	• Create information through the use of technologies
Self-Advocacy	• Appropriately express a range of emotions to communicate personal ideas/needs	• Ask questions to develop further personal understanding	• Demonstrate confidence in sharing ideas/feelings	• Demonstrate an accurate and clear sense of goals, abilities, needs and knows how to request and/or acquire them
Leadership	• Model positive behaviors for others	Demonstrate leadership skills (e.g., organizing others, taking initiative, team-building)	• Demonstrate confidence while recognizing personal actions impact others	• Educate and inspire others to realize their potential

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End Notes

[i] Maine Department of Education. (n.d.) Understanding Maine's Guiding Principles report. Retrieved from
http://www.maine.gov/doe/proficiency/standards/guiding-principles.html

[ii] Maine Department of Education. (n.d.) Understanding Maine's Guiding Principles report. Retrieved from
http://www.maine.gov/doe/proficiency/standards/guiding-principles.html

[iii] The Entrepreneurial Skills chart draws heavily from The Partnership for 21st Century Skills (2009) and Maine Department of Education (n.d.).

[iv] The Personal Skills chart draws heavily from The Partnership for 21st Century Skills (2009) and Maine Department of Education (n.d.).

[v] The Civic/Interpersonal Skills chart draws heavily from The Partnership for 21st Century Skills (2009) and Maine Department of Education (n.d.).

[vi] The Professional Skills chart draws heavily from The Partnership for 21st Century Skills (2009) and Maine Department of Education (n.d.).