

STEM NEXT

CAREER-CONNECTED LEARNING

A Framework for Out-of-School Providers



What is Career-Connected Learning: A Framework for Out-of-School Time Providers?

Developed by the STEM Next Opportunity Fund, Career-Connected Learning: A Framework for Out-of-School Time Providers is intended to support the out-of-school-time field in facilitating career-connected learning experiences in science, technology, engineering, and math (STEM) with youth. At STEM Next, STEM encompasses computer science, computational thinking, data analysis, and innovation in technology-driven fields.



What is career-connected learning?

When you reflect on your career development journey, you probably remember important milestones that brought you to where you are today; however, you might not remember the process—every step, learning opportunity, or experience in school and out of school—that informed your career path. Career-connected learning is just that, a learning process that takes time and effort and involves a continuous progression of skill development and engagement in various activities, spanning from elementary to high school. The out-of-school-time space is uniquely well-situated for this process given increased flexibility around time, content and activity choice.

The Framework identifies three stages of career-connected learning

Awareness

Exploration

Preparedness

The Framework identifies three stages of career-connected learning—awareness, exploration, and preparedness—and four foundational strategies of high-quality career-connected learning across each stage. Each strategy lists tactics out-of-school time providers can incorporate into their program and activities to explicitly connect STEM more closely to career and build the skills needed for youth to thrive. Tactics are intended to build upon each other as a young person moves from elementary to middle and onto high school. Some tactics repeat across grade/age levels, and this is intentional. For example, older learners who have not yet been exposed to careers may need to build basic awareness before moving on to exploration. In every case, differentiating ¹ and personalizing learning can be effective strategies for addressing individual needs.

¹ - Differentiated instruction involves adjusting instruction and activities based on a young person's readiness and learning preferences and how they best process information.



Elementary School

Career Awareness



The primary focus in elementary school is on introducing youth to the concept of work, fostering an understanding of careers, and emphasizing the value of lifelong learning. Afterschool and summer learning providers, families, and community members play a crucial role in supporting youth in developing durable skills, teamwork, and goal-setting abilities and navigating their interests and skills.



Middle School

Career Exploration



In middle school, it is all about exploring. During this time, youth increase their awareness of different careers and pathways by exploring and identifying what education or training is needed to reach their career interests and goals. As youth dig deeper into understanding themselves and the world of work, their skills, preferences, and interests start to become clearer. During this phase, it is essential to inspire students to think beyond what they know about careers and consider pathways they might not be familiar with yet.



High School

Career Preparedness



In high school, the emphasis is on honing in on career choices and gaining hands-on experiences that prepare youth for the world of work. At this stage, youth are developing a clearer vision of what their path beyond high school could be, therefore it is important for youth to test or try on different experiences to see if they are a good fit.



Who should use this resource?

This Framework is intended to be used by out-of-school time leaders, including statewide Afterschool Networks and city intermediaries that provide technical assistance and professional development to afterschool and summer learning providers.

The Framework can support system leaders in their efforts to help providers assess the quality of their work as it relates to career-connected STEM and to support them in developing action plans geared toward continuous improvement.

This Framework is also intended to be used by afterschool and summer learning programs to help increase their understanding of career-connected STEM, strengthen the quality of their STEM offerings, and help train their staff on how to develop STEM activities that are more connected to career.





Career Awareness

Build an awareness of the concept of work and emphasize the value of lifelong learning. Assist all youth to develop durable and social skills and build upon their interests and strengths.

Broad Skill Development

- Provide opportunities for all youth to cultivate durable skills (i.e., critical thinking and collaboration) and growth mindset—the belief that we can improve our STEM skills with practice. Also build opportunities for youth to practice STEM specific skills (i.e., measurement, use of STEM tools).
- Demonstrate goal setting and understand the importance of teamwork in working toward a common goal.
- Build upon self-awareness of strengths, hobbies, and interest

Career-Connected STEM

- Facilitate relevant, high-quality STEM activities where youth explore the practices of STEM professionals.
- Provide examples for all youth to understand the concepts of job and career (i.e., jobs and careers in their community, career fairs, local guest speakers, STEM videos, visits to family at work).
- Design activities where youth have voice and choice and see how STEM can make a difference in their lives and communities.

Family and Community Engagement

- Provide regular communication with families to share STEM and career resources, youth progress, and successes.
- Include STEM professionals from the community and beyond into STEM activities, including virtual activities.
- Organize family and community engagement opportunities (i.e., take-home STEM activities, family STEM nights, career days) to celebrate everyday STEM.

Connected Pathways and Partnerships

- Connect out-of-school time STEM to school to create a STEM opportunity continuum, if possible.
- Organize exposure trips to local science centers, farms, or places of work to see STEM in action, including virtual opportunities.
- Connect with your state Afterschool Network and the Afterschool Alliance to support program quality.



Career Exploration

Increase awareness of different careers and inspire youth to think beyond what they know. Support all youth to build a deeper understanding of themselves and the skills necessary for work.

Broad Skill Development

- Provide opportunities for all youth to build durable skills (i.e., communication, teamwork, and positive decision-making) and growth mindset ¹ (i.e., viewing setbacks as opportunities and openness to feedback). Include time to apply STEM specific skills such as measurement, rounding, equipment use, etc.
- Complete career interest assessments to connect strengths, values, and interests to career choices.
- Explore and research career clusters and pathways that align with strengths and interests.

Career-Connected STEM

- Facilitate relevant, high-quality STEM activities where youth engage in the practices of STEM professionals.
- Incorporate explicit career connections in STEM activities (i.e., local guest speakers, STEM videos, career fairs, STEM challenges, workplace learning tours).
- Design activities where youth have voice and choice and see how STEM can make a difference in their lives and communities.

Family and Community Engagement

- Provide regular communication with families and involve them in career planning and goal setting.
- Provide opportunities for all youth to learn directly from STEM professionals and role models in their community and beyond, including virtual opportunities.
- Organize family and community engagement opportunities (i.e., family workshops to discuss their role in career development) to increase awareness of STEM career development.

Connected Pathways and Partnerships

- Curate partnerships between out-of-school time STEM and schools, museums, libraries, and other local organizations to build intentional STEM pathways for all youth.
- Organize exposure trips to local science centers, museums, farms, or places of work to see STEM in action, including virtual opportunities.
- Connect with your state Afterschool Network, Chamber of Commerce, workforce development agency, and post secondary institutions (i.e., community colleges, universities, trade schools) to increase STEM pathways.

1 - Growth mindset is the belief that our intelligence and abilities can be developed through effort, learning, and persistence. It is a way of viewing challenges and setbacks as opportunities for growth and learning, rather than as indicators of fixed limitations.



Career Preparation

Hone in on career choices and gaining hands-on experiences that prepare youth for the world of work. Provide all youth activities and experiences to prepare them for future STEM pathways and career goals.

Broad Skill Development	<ul style="list-style-type: none">• Encourage youth to apply durable skills in work-based learning,¹ part-time employment, or leadership programs (i.e., Flight Crew and STEM Ambassadors).• Incorporate real-life examples of people who have exhibited a growth mindset and triumphed over failure.• Organize opportunities for youth to expand their network and build their social capital (i.e., Networking Night, mock interviews)
Career-Connected STEM	<ul style="list-style-type: none">• Facilitate industry-specific projects and tasks that simulate the world of work.• Incorporate explicit career connections in STEM activities (i.e., local guest speakers, career fairs, workplace learning tours).• Implement youth-led projects and programming (i.e., Teen Science Café) so youth can see how STEM can make a difference in their lives and communities.
Family and Community Engagement	<ul style="list-style-type: none">• Participate in community service projects and encourage youth-led initiatives.• Partner with industry and places of work to organize tours and real-world learning experiences.• Organize family and community engagement opportunities (i.e., family volunteers to serve as mock interviewers, discussions with families about work-based learning) to support STEM career development.
Connected Pathways and Partnerships	<ul style="list-style-type: none">• Coordinate with school systems, local or regional government, and industry to support work-based learning for all youth.• Organize exposure trips to local science centers, museums, farms, or places of work to see STEM in action, including virtual opportunities.• Connect with your state Afterschool Network, Chamber of Commerce, workforce development agency, and post secondary institutions (i.e., community colleges, universities, trade schools) to increase STEM pathways.

1 - Work-based learning is when youth complete meaningful job tasks, such as through apprenticeships, internships, or entrepreneurships, to develop a readiness for work.

Helpful Definitions

Career-Connected Learning (CCL)



An evolving strategy in school and out-of-school time settings that explicitly integrates real-world connections and career exposure into curricula and programs. CCL helps youth build vital skills they will need to thrive in school and career.

Durable Skills



Also known as soft skills or 21st-century skills, durable skills are skills we use to share what we know, like critical thinking, collaboration, creativity, and communication, as well as character skills like growth mindset, fortitude, and leadership. Better integrating durable skills into education pathways will help ensure a broader, more inclusive group of learners ultimately find success in their careers and communities.

Growth Mindset



Popularized by Dr. Carol Dweck, a psychologist who has extensively studied the impact of mindset on learning and success, growth mindset is the belief that talents and abilities can be developed through dedication, hard work, and perseverance. It is the opposite of a fixed mindset, which assumes that abilities are innate and unchangeable. People with a growth mindset embrace challenges, learn from setbacks, and view effort as a path to success.

Work-Based Learning



Work-based learning provides real-world experience that bridges classroom knowledge with the demands of future jobs. Examples of work-based learning include internships, apprenticeships, on-the-job training, and transitional jobs. Work-based learning can also include job shadowing, mentoring, and student-led enterprises. These experiences can be paid or unpaid, and they often involve working under the guidance of a supervisor for a set period.



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