EXPANDING MIDDLE SCHOOL CTE TO PROMOTE LIFELONG LEARNER SUCCESS

OCTOBER 2018

Expanding Middle School CTE to Promote Lifelong Learner Success

Middle school Career Technical Education (CTE) has the power to expose students to college and career options and equip them with the transferable skills they need to plan for and succeed in high school and beyond. Middle school CTE adds relevancy to students' learning experiences by exposing them to real-world options and connecting academics to career and college options. CTE in middle school can also serve as a key dropout prevention strategy, mitigating many of the challenges students face as they transition into high school, such as disengagement or lack of preparation.[1]

In recent years, a number of states have invested resources and supports to expand CTE and career exploration opportunities in middle schools, a trend that is likely to continue with the recent passage of the Strengthening Career Technical Education for the 21st Century Act (Perkins V), which now allows states to use Perkins funding to support CTE as early as fifth grade. This expansion provides many opportunities as well as challenges for state leaders. Specifically, states must grapple with how to define the purpose or goals of middle school CTE, ensure access to and expand high-quality middle school CTE programs for each learner, align middle school CTE programs to high school programs, provide various middle school CTE options to meet the unique needs of each learner, and track student outcomes to ensure that they are investing their resources in high-quality programs only.

To help states unpack the potential approaches to expanding and ensuring high-quality middle school CTE options, Advance CTE — in partnership with the Council of Chief State School Officers and Education Strategy Group, through the New Skills for Youth Initiative, funded by JPMorgan Chase & Co. — examines how middle school CTE can be a stepping-stone on the way to a postsecondary degree or credential of value. This report examines leading states' approaches to middle school CTE and was informed by interviews with State CTE Directors and state and local leaders and practitioners who support middle school CTE or work directly with middle school CTE students.

NEW SKILLS FOR YOUTH
JPMorgan Chase & Co.
CCSSO
Council of Chief State School Officers
ADVANCE CTE
State Leaders Connecting Learning to Work
ESG Education Strategy Group

Leveraging In- and Out-of-School Experiences to Expand Access to Middle School CTE

One of the most significant challenges states will face with middle school CTE is ensuring access for each learner. Recognizing a need to provide diverse options for learners, **Nebraska** has leveraged both in- and out-of-school experiences and opportunities, resulting in robust middle school CTE opportunities.

The middle school CTE courses offered in Nebraska are exploratory and introductory in nature, cutting across several of Nebraska's career fields (i.e., the way in which Nebraska structures the 16 Career Clusters®). These introductory courses align with programs of study and provide students with a knowledge base and technical skills related to an industry, such as business technology. The standards for these introductory courses incorporate career exploration to ensure that students are exposed to a range of career options while they also begin to develop critical technical and transferable skills.

To develop standards for middle school CTE courses, Nebraska convenes a task force that consists of middle school CTE teachers, administrators and guidance counselors. This task force also examines strategies for middle school CTE options, including practices to strengthen instructional delivery methods and career development opportunities.

After School Career Exploration

Nebraska also provides extensive career exploration opportunities through work-based learning and after school experiences.

The Nebraska Career Education department partnered with the Nebraska Department of Education's expanded learning initiative, which includes middle school, to develop a career education after school curriculum. The Career Education After School Curriculum, which is specific to upper elementary and middle school students, introduces and explores the state's

Nebraska Career Education Curriculum for After School Programs' six career fields. Retrieved from "'So you want to be a…' Curriculum Guide" (Beyond School Bells, 2016).

six career fields across 18 lessons — three lessons for each career field. During the three lessons students are introduced to a career field, explore different careers within the career field, and demonstrate their understanding of the career field.

Each career field has a unit project, which requires students to seek a solution for a real-world problem in the related career field. For example, the health sciences unit project involves students examining the top five health problems plaguing their community and developing a plan to prevent those health problems. At the end of the six units students participate in a "showcase event," during which they present their unit projects to their parents and to community and industry partners from within the career field they have studied.

Nebraska uses Perkins funds to support this work and partners with a statewide foundation, Nebraska Children and Families Foundation, to make outreach to after school programs to implement the curriculum. By integrating career exploration into after school programs in a structured way that helps students develop skills and learn about industries in their communities and beyond, Nebraska is able to expand career exploration opportunities to students who may not be able to participate in traditional CTE middle school courses due to scheduling conflicts or limited course offerings. Alternative delivery methods, such as the one proposed by Nebraska's after school curriculum, are critical for ensuring that each learner has access to the career exploration and skill development opportunities necessary for lifelong success.

Nebraska Developing Youth Talent Initiative

Career exploration occurs on a spectrum, and opportunities in the middle grades can take many forms, including job shadowing, simulated learning experiences, and classroom visits from business and industry. Specifically, work-based learning opportunities equip students with real-world experience that helps them to develop employability skills, such as interpersonal and communication skills, and allows them to apply academic skills to real-world situations.

Recognizing the importance of work-based learning to producing career-ready students, in January 2015 Nebraska Governor Pete Ricketts proposed the Nebraska Developing Youth Talent Initiative (NDYTI), a program that connects seventh and eighth graders to learning opportunities in the manufacturing and information technology (IT) industries in Nebraska.

Through NDYTI, the Nebraska Department of Economic Development administers up to $250,000 total to a minimum of two projects. Businesses in the manufacturing and IT sectors are the lead applicants for the grants and must partner with a local public school to develop a program or project. One of the two projects must serve a community that has a population of fewer than 100,000 people to ensure that rural communities benefit from this initiative.

Since its inception, there have been nine grant recipients, directing hands-on learning experiences for thousands of students in more than 20 schools. Grant recipients tend to implement one of two models at local public schools: a mobile trailer or a career development rotational program. In the mobile trailer model, employers purchase a trailer and equip it with equipment relevant to their sector, such as computers or manufacturing equipment. The trailer travels to multiple middle schools, where students use the equipment and learn more about the sector from the employer(s). The middle schools, in cooperation with the businesses, develop a curriculum that integrates the use of the equipment in the trailer. This model is a particularly strategic way for rural students to learn about career options that may not be available in their specific community.[2]

In other cases, grant recipients help fund career development rotational programs with the goal of rejuvenating exploratory programs in the middle schools and allowing students to experience hands-on opportunities to explore the skill sets needed in the manufacturing and IT industries. Some grants are used to purchase relevant equipment with input from the partner employer to develop exploratory programs or school enterprises. Students in these programs learn about the particular industry or sector through use of the equipment, mentoring from the partner employer, and accompanying tours of the employer's facilities or workspace. Other uses of the grants include specialized training for middle school teachers to equip them to better prepare students for and excite students about further career exploration in high school.

One critical outcome of NDYTI is the increase in and strengthening of partnerships among employers, schools and students. For instance, one program required more than 100 hours of direct coordination between business and school partners to establish a program consisting of a science, technology, engineering and mathematics (STEM) mobile trailer, virtual reality video and manufacturing curriculum. The preliminary result from this collaboration was that 100 percent of program participants "agreed" or "strongly agreed" that they have a strong knowledge of careers in manufacturing and an interest in a

manufacturing career by the end of the program, an increase from 69.23 percent and 53.84 percent respectively.[3] Another program developed a manufacturing curriculum and increased industry involvement in the classroom from zero hours in the previous year to 35 hours in the program implementation year.[4] Another outcome was an increase in students' understanding of the importance of critical "soft or life skills." All grant recipients working within career development rotational programs reported this outcome.

Aligning Middle School and High School CTE to Ensure Student Success

In addition to providing career awareness and exploration, another major consideration is if and how middle school CTE should begin to build technical skills among students to help prepare them for CTE in high school. **Ohio** offers a unique approach to middle school and high school CTE alignment by offering both exploratory courses and the option for students to take the equivalent of high school CTE introductory courses, which are a part of a state-approved program, in eighth grade.

In 2014, Ohio Governor John Kasich signed H.B. 487 into law, which required schools to provide CTE courses in seventh and eighth grades by the 2015-16 school year. By doing so, Ohio became one of the only states to require the availability of CTE courses to middle school students. Districts that do not want to offer middle school CTE courses must submit a public waiver to the Ohio Department of Education.

Since the passage of this law, Ohio has developed middle school CTE options that align strongly with high school CTE programs. Ohio achieves this alignment in part by using the same standards for middle school and high school CTE courses, as the state develops program-level, rather than course-level, standards. As part of the program of study approval process, districts must show vertical alignment between middle school and high school CTE programs.

Manufacturing and Entrepreneurship Program in York, NE

In the 2017-18 school year, Cyclonaire, a Nebraska manufacturing company that specializes in pneumatic conveying solutions, partnered with York Middle School to develop a manufacturing and entrepreneurship school-based enterprise program through NDYTI.

Students in the program manufactured and sold products based on an established business plan. The students created a prototype of their product using an industry-sized laser cutter that was purchased through the NDYTI grant. Staff from Cyclonaire came to the school to mentor the students and help them develop their products and business plans. The company then helped students produce their products, which were pitched and sold to Cyclonaire employees.

Through this experience students were able to interact directly with industry representatives and learn entrepreneurial and employability skills, such as communication and adaptability, as well as technical skills.

While these standards ensure that the middle school CTE programs are aligned with high school CTE programs, the Ohio Department of Education also provides outlines for each course that is allowed at the middle school level, as well as guidance on implementation. While most middle school CTE courses require a teacher to hold only a standard teacher license and complete a short online course related to CTE, the teachers who teach the equivalent of the high school CTE courses in eighth grade must hold the appropriate CTE credential in the appropriate career field. Eighth graders who participate in the high school-equivalent courses may be required to take an end-of-course test to receive high school credit based on local rules and regulations.

Messaging Middle School CTE

As states begin to offer CTE in middle schools, they must consider how they will message CTE programs of study to learners and their parents. Below are some dos and don'ts of messaging middle school CTE:

Do…	Don't…
Emphasize that CTE is about career exploration and students finding their passion.	Portray middle school CTE as job training.
Emphasize the flexibility of middle school CTE: Students can easily switch to another area of interest in high school.	Portray middle school CTE as "tracking" students into one program of study or area of interest.
Emphasize that middle school CTE is about developing real-world skills that will help students in high school, in postsecondary education and beyond.	Pit CTE against academics. CTE is not only about technical skills development.
Emphasize that middle school CTE helps students prepare for college AND careers.	Leave out all the other high school experiences that students can participate in such as competitions, career technical student organizations and more.
Emphasize the benefits of CTE: CTE learners and their parents are more satisfied with their education than those not involved in CTE.	

Allowing teachers to have any teacher licensure to teach most middle school CTE courses allows Ohio to have a broader pool of teachers and alleviates some concerns about teacher shortages, given the middle school CTE requirement. However, Ohio must still ensure that teachers possess the skills and knowledge to properly teach middle school CTE courses. To do so, Ohio mandates that all teachers who teach middle school CTE courses complete a middle school CTE validation process, which consists of online modules that overview the pedagogy of a CTE class and CTE standards.

Since the passage of the law mandating middle school CTE, Ohio has seen a dramatic increase in access to these programs, with 21,551 students participating in middle school CTE in 2015 and more than 73,728 students participating in middle school CTE in 2017. By mandating the availability of CTE options and ensuring vertical alignment between middle school and high school CTE, states can ensure expanded access to middle school CTE options and that more students begin to develop earlier the skills they need to succeed in high school CTE programs.

Exploring Middle School CTE Credit Options to Allow Students Flexibility

As states plan to implement and expand middle school CTE options, they will have to grapple with how students can obtain credit or meet requirements for CTE. States such as **Utah** have begun to explore a competency-based approach to middle school CTE.

Utah has offered middle school CTE to students through a required career awareness course for more than 25 years. Prior to changes made by the Utah State Board of Education in March 2018, students had to complete the College and Career Awareness and Digital Literacy courses as part of their middle school graduation requirements. With the March 2018 board changes, students now have the option to meet these requirements through competency-based approaches.

The College and Career Awareness course standards outline the knowledge and skills students must possess to effectively identify their interests, abilities and skills and develop a plan for college and career goals. The standards require students to explore careers and the education and training required across and within Career Clusters.

At the end of the school year, each local education agency is required to submit an End of Year Summary to the Utah State Board of Education that illustrates that the local education agency taught each of the College and Career Awareness standards to students. Until recently, the End of Year Summary required local education agencies to indicate how long they spent teaching each College and Career Awareness standard and the project-based learning activities. In March 2018, the Utah State Board of Education removed the language of credit from the middle school education requirements in the Elementary and School General Core. The board changes added language that would allow local education agencies, with parental consent, to substitute the middle school education course requirements, including College and Career Awareness and Digital Literacy, with a course, extracurricular activity or experience that is similar to the course requirement or consistent with a student's plan for college and career readiness. As part of this change, participating local education agencies will be required to establish a policy governing the substitution of course requirements.

> "Being able to have College and Career Awareness and other courses at the middle school level has allowed students to explore what CTE can offer them. It has been the building blocks to the high school courses to get students excited about what is offered and how they benefit from [these offerings]. It also gives them opportunities to be career ready as our standards are based on industry needs, as well as state needs and job demand."
>
> —Ashley Higgs, Utah State Board of Education

These board changes shift the middle school CTE requirements from being solely based on seat time to providing students with the flexibility to meet these requirements in ways that take place outside of the classroom as long as they align with students' college and career readiness goals. For instance, students who participate in an extracurricular activity or receive an industry certification may be able to meet the College and Career Awareness requirement depending on the activities they complete and the certification they receive.

To ensure quality, students must still learn the standards associated with the course requirements in their entirety. Local education agencies will still be required to fill out the End of Year Summary for the College and Career Awareness standards to receive funding, but the document will reflect the shift to a competency-based approach. These changes to the document will be determined by the College and

Career Awareness Advisory Committee, which consists of teachers, directors, university representatives and industry representatives.

While Utah's competency-based approach to middle school CTE is still being implemented, it represents an alternative approach to middle school CTE that can allow each student to participate in career exploration in a variety of ways. The shift to a competency-based approach was the result of the Utah State Board of Education's desire for students to have ample time and opportunities to explore their interests in middle school. The hope is that this approach will increase student engagement and interest by allowing students to meet the standards in ways that are interesting and relevant to them and that work best for their learning style. Flexible credit options can allow middle school CTE to be tailored to the specific needs of students. Additionally, this competency-based approach creates incentives for districts to offer more experimental learning opportunities and may help to align extracurricular activities with career advisement.

Expanding Middle School CTE and Tracking Student Outcomes

As states begin to invest more in middle school CTE, they will need to establish a way to show that their investments are leading to the desired student outcomes. States such as **North Carolina** are investing in middle school CTE expansion and establishing ways to track student outcomes to ensure that programs are preparing students appropriately for high school CTE and college and career success.

In recent years, North Carolina has made efforts to expand its middle school CTE to provide students with the support and options needed to prepare for high school CTE programs. North Carolina's middle school CTE options are guided by the Career and Technical Education Essential Standards, a guide approved by the North Carolina State Board of Education that provides descriptions of program area courses aligned with the Career Clusters.

Career Exploration in Elementary School

One of the significant changes in Perkins V is that it allows states to use federal funds to support CTE as early as fifth grade. As a result, states should begin to think about if and how they will implement career exploration beginning in elementary school. Below are some actions that states have taken to advance career exploration in elementary school as part of their broader K-12 career development and advisement continuum:

SOUTH CAROLINA: The South Carolina Economic Development Act of 2005 requires school districts to provide career awareness activities to elementary school students to lay the foundation for the 16 Career Clusters.[5]

VIRGINIA: The Virginia State Board of Education passed regulations that require elementary school students to explore different occupations associated with Career Clusters and select areas of interest. In addition, it directed students to develop an academic and career plan portfolio in the elementary grades.[6]

PENNSYLVANIA: Under the state's Every Student Succeeds Act plan, Pennsylvania's accountability system includes Career Readiness as a student quality or student success indicator. Pennsylvania reports the percentage of students who demonstrate engagement in career awareness and preparation via a career exploration or preparation program or curriculum by the end of fifth grade.

GEORGIA: The Georgia Department of Education offers guidance on Cluster-aligned activities for elementary school. Guidance for activities on finance, government and public administration, IT and marketing are offered for fifth grade.[7]

Each middle school CTE course has a standards-based blueprint that defines learning outcomes; sets priorities for learning; and aligns with labor market needs, business and industry input as it relates to skills and knowledge, and the knowledge, skills and abilities outlined in the National Career Clusters® Framework. Each middle grades CTE course is divided into sub-courses by content-related objectives. The local education agency may select the sub-course(s) that best fit the local needs and each middle school schedule. This provides flexibility to local education agencies to align middle school courses with high school course offerings. Like Ohio, Nebraska and Utah, North Carolina's standards development processes engage industry and educational stakeholders.

North Carolina Career and Technical Education Grade Expansions Program

Recognizing the role that middle school CTE can play in preparing students for lifelong success and closing academic achievement gaps, the North Carolina Education and Workforce Innovation Commission, North Carolina Superintendent of Public Instruction, and North Carolina State Board of Education developed the Career and Technical Education Grade Expansions Program. In 2017, the North Carolina Legislature passed G.S. 115C-64.17 to establish the program, which prioritizes the inclusion of sixth and seventh grades in CTE through competitive grant awards provided to selected local school administrative units for up to seven years.

The grants are used to employ additional licensed personnel in CTE areas, career development coordination areas and support services specifically to advance CTE programs in sixth and seventh grades. In the 2017-18 fiscal year, 14 districts received a total of $700,000, which increased to a total of $1.4 million for the 2018-19 fiscal year. Of the 14 grant recipients, nine chose to employ career development coordinators to work with administrators and teachers to ensure the delivery of career development services and coordinate linkages with parents, postsecondary institutions, industry and organizations to support students' transitions to high school, postsecondary education and employment. Career development coordinators can play a critical role in promoting career awareness and connecting students to the resources they need to feel prepared for high school and beyond.

While most states analyze only student participation data for middle school CTE, grant recipients of the North Carolina Career and Technical Education Grade Expansions Program are required by law to establish a strategy to analyze program outcomes. Grant recipients must submit an annual report that provides information on the use of grant funds, including the specific CTE programs that have been expanded to include sixth and seventh

Middle School CTE Funding

The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) can support CTE programs as early as seventh grade. Perkins V, which goes into effect July 1, 2019, lowers the threshold to as early as fifth grade. This shift provides states with the opportunity to consider how and if they will use Perkins V funding to support CTE in the middle grades.

Some states, such as **Nebraska**, take a braided funding approach and use both Perkins IV and local funds to support CTE in the middle grades. Other states, such as Maine, had to pass legislation to redefine their state definition of CTE to permit Perkins IV funds to be used for CTE in the middle grades. In 2017, the **Maine** Legislature passed L.D. 1576, which redefined the state definition of CTE to include language about middle school, effectively allowing middle school students in grades six through eight to participate in CTE and for funds to be used to support middle school CTE. To pilot middle school CTE, Maine plans to braid private funds from a foundation with state funds. While both Nebraska and Maine have taken state action to support middle grades CTE as early as sixth grade, federal funds can still not be used before seventh grade.

grades; the number of students enrolled in CTE courses as a part of the expansion; the number of students who subsequently enrolled in CTE courses in high school; the number of students who subsequently participated in internships, cooperative education or apprenticeship programs; and the number of students who subsequently earned college credit and approved industry certification and credentials.

By tracking these outcomes, North Carolina will be able to measure the perceived impact of middle school CTE on students' participation in high school CTE, work-based learning opportunities, and postsecondary credit and credential attainment. North Carolina will have the data to make the case for the importance of middle school CTE and the role it plays in preparing students for high school and beyond.

Major Considerations for Expanding Middle School CTE

Middle school CTE is an effective tool to prepare students for high school CTE programs and beyond, keep students engaged, and equip students with lifelong planning skills. As illustrated by the examples discussed in this report, states have taken many different approaches to implementing high-quality middle school CTE programs. However, as states begin to plan, implement and expand middle school CTE options they should consider the following:

- **Career Exploration and Career Preparation:** As a first step, states need to determine the purpose of middle school CTE. Is middle school CTE about career exploration, career preparation or both? While Perkins V incentivizes states via funding to implement career exploration as early as fifth grade, states need to determine when they think it is appropriate for students to begin to develop technical skills.
- **Standards:** To ensure high-quality middle school CTE options for each learner states need to develop robust, validated middle school CTE standards. These standards should be developed and validated with input from teachers, postsecondary representatives and business and industry. Middle school CTE standards should connect and align with high school CTE standards and expectations.
- **Funding:** While Perkins V allows federal funds to support CTE as early as fifth grade, it is not a requirement. As states consider how to establish, expand and/or sustain middle school CTE, they can use Perkins funds to support these efforts or may consider braiding federal, state and local funds. However, as always, states must ensure that these decisions are not in violation of "supplement not supplant" provisions in federal law. This means that Perkins funds can be used to supplement, and not supplant, state and local funds.
- **Restrictions:** States may want to consider removing any restrictions that prevent them from accessing Perkins V funding for middle school and fifth grade, such as a state definition that defines CTE as being for ninth grade and above.
- **Data and Accountability:** States need to ensure that they are investing their resources in programs that lead to their desired outcomes. They can determine whether they are meeting this goal through tracking student outcomes and the impact that middle school CTE has on students' involvement and success in high school CTE programs and beyond.
- **Capacity:** As states expand middle school CTE offerings, they need to ensure that there are enough qualified teachers and administrators to support the programs. Given the general shortage of CTE teachers, states need to determine what licenses and experiences teachers must have to teach middle school CTE programs and what professional development opportunities they will provide teachers to help them meet these requirements. Additionally, states should consider what other staff support, such as career development coordinators, they will need to sustain these programs.

- **Credit Options:** States must consider whether they want to take a competency-based or seat-time approach (or a combination) to students earning credit for middle school CTE programs. Competency-based approaches can allow students to explore their interests in and outside of the classroom while also obtaining credit, whereas seat-time approaches guarantee that students will receive a certain number of hours of instruction on specific CTE-related topics.
- **Alignment:** To be considered high quality, middle school CTE options must align with and support students' participation in high school CTE programs. As states develop middle school CTE options, they must consider how the options they offer will help students succeed in their existing high school CTE programs.
- **Work-Based Learning:** States should consider what work-based learning experiences are appropriate for which grade levels and what form work-based learning can and should take. States should consider how their work-based learning opportunities fit into the broader career exploration continuum and how they will engage employers to provide work-based learning opportunities to students.
- **Equity:** States should consider how they can ensure access to and leverage middle school CTE as a tool to ensure equitable outcomes for students across populations. States should consider how exposure to Career Cluster-based middle school CTE options can help to mitigate bias related to specific occupations and how middle school CTE can help students identify and align their interests to education and career paths.

Acknowledgements

Advance CTE would like to thank the following State CTE Directors, teachers, directors, staff, administrators and organizations for their input into this report: Leah Amstutz, Associate Director, Office of Career-Technical Education, Ohio Department of Education; Pete Callas, Administrator, Career and College Transition Division, High School Innovations and Initiatives Office, California Department of Education; Kelly Fike, Teacher, Business/Computers, York Middle School, NE; Margaret Harvey, State CTE Director, Maine Department of Education; Ashley Higgs, Specialist, CTE K-8 Education: College and Career Awareness, Digital Literacy, Keyboarding, Utah State Board of Education; Lauren Jones, CTE Program Director for Special Populations, Counseling and Equity, Middle School CTE Program Director, Colorado Community College System, Career and Technical Education; John Kirkman, Assistant Director, Perkins, Legislation, Budget, Policies, North Carolina Department of Public Instruction; Thalea Longhurst, State CTE Director, Utah State Board of Education; Adkins "Trey" Michael, Director, Career and Technical Education, North Carolina Department of Public Instruction; Emily Passias, State CTE Director, Ohio Department of Education; Bradley Pierce, Business Development and Recruitment, Nebraska Department of Economic Development; Stephen Sautter, Teacher, Media/Technology, York Middle School, NE; Kristin Vest, Career Field Specialist–Family and Consumer Sciences, Nebraska Department of Education; and Donna Wyatt, Director, Career and College Transition Division, California Department of Education; and Association for Career and Technical Education (ACTE).

This report was developed through the New Skills for Youth initiative, a partnership of the Council of Chief State School Officers, Advance CTE and Education Strategy Group, generously funded by JPMorgan Chase & Co.

[1] National Dropout Prevention Center. (n.d.). *Career and Technical Education (CTE).* Retrieved from http://dropoutprevention.org/effective-strategies/career-and-technology-education-cte/

[2] Advance CTE. (2017). *CTE on the Frontier: Connecting Rural Learners with the World of Work*. Retrieved from https://careertech.org/resource/cte-frontier-world-work

[3] Dentlinger, C. (2017). *Nebraska Developing Youth Talent Initiative*. Retrieved from https://www.nebraskalegislature.gov/FloorDocs/105/PDF/Agencies/Economic_Development__Department_of/598_20170915-164428.pdf

[4] Ibid.

[5] South Carolina Education and Economic Development Act (2005), see https://www.scstatehouse.gov/code/t59c059.php

[6] Virginia Administrative Code–8VAC20-131-140. College and Career Readiness; Career Exposure, Exploration, and Planning; and Opportunities for Postsecondary Credit, see https://law.lis.virginia.gov/admincode/title8/agency20/chapter131/section140/

[7] Georgia Department of Education. (n.d.). *Elementary Career Cluster Activities*. Retrieved from http://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/counselor/Pages/Elementary.aspx