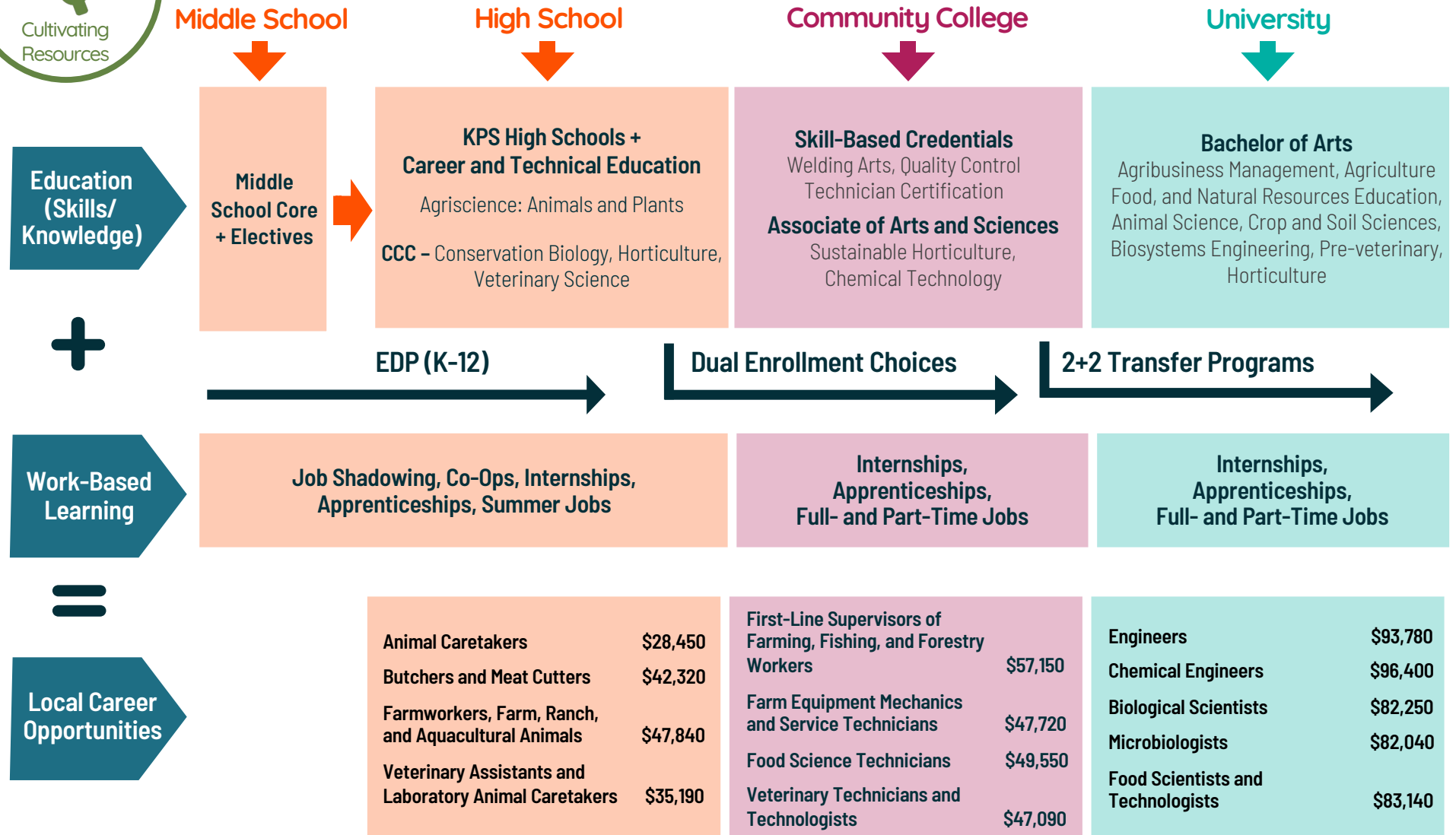




Agriculture

Agribusiness • Ag. Technology & Automation • Animal Systems • Food Science & Processing • Plant Systems • Water Systems



Design Your Path to Your Promise
— Explore Where You Can Go.

Kalamazoo Public Schools

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Agriculture

Design Your Path to Your Promise — Here's How You Can Get There.

MIDDLE SCHOOL

English Language Arts	Math	Science	Social Studies	World Language	Enrichment	Career Readiness	Elective Focus
English	6 th Grade Math or Accelerated Math	6 th Grade Science	Social Studies	Spanish for Beginners (Elective)	Physical Ed./Band, Orchestra, or Choir	Life Skills	Tech Smart
English	7 th Grade Math or Accelerated Math	7 th Grade Science	Social Studies	Spanish Intermediate	Physical Ed./Band, Orchestra, or Choir	Life Skills	Tech Smart
English	8 th Grade Math or Algebra	Science/Robotics	Social Studies	Spanish 1	Physical Ed./Band, Orchestra, or Choir	Life Skills	Tech Smart

HIGH SCHOOL

English Language Arts	Math	Science	Social Studies	World Language	Enrichment	Career Readiness	Elective Focus
English 9 / Honors English	Algebra 1 or Geometry	Environ. Science & Biology (CEB)	World History	Spanish	PE	Tech Smart	Band, Orchestra, or Choir or other career programs below.
English 10 / Honors English	Geometry or Algebra II	Biology (DEE) or Chemistry or Physics	US History	Spanish	Health	College/Career Readiness	
English 11 A or Honors or AP	Algebra II and/or Personal Finance	Earth Science	Gov or AP Gov	Spanish / French	Eco Art	Economics	
College Eng. 12 or Honors Eng.	Pers. or Bus. Fin. or Stageology	Geology	Social Studies Elective	Spanish / French	Fine Arts	Conservation Biology	

Grade	Possible Career-Connected Pathway Choices		Dual Enrollment Courses	Postsecondary Programs/Majors/Apprenticeships for Occupations in this Career Cluster	
9	Earth Science A & B	Eco Art	<ul style="list-style-type: none"> Cellular Biology Fundamentals of Physics Introduction to Horticulture Introduction to Sustainable Food Systems Introduction to Welding Horticultural Management 	Certificates, Associate's Degrees, and Apprenticeships <ul style="list-style-type: none"> Sustainable Horticulture, AAS Chemical Technology, AAS Welding Arts Quality Control Technician Certification 	Bachelor's and Advanced Degrees <ul style="list-style-type: none"> Agribusiness Management Agriculture, Food, and Natural Resources Education Animal Science Crop and Soil Sciences Biosystems Engineering Pre-veterinary Horticulture
10-12	Agriscience: Animals & Plants	Horticulture			
10-12	Conservation Biology	Biotechnology A&B			
12	Veterinary Science	Welding			

Kalamazoo Public Schools

College and Career Awareness & Exploration Resources

Higher Education



Early/Middle College Programs

Kalamazoo County Early/Middle College (EMC) is an innovative early college program, which gives students the opportunity to earn an associate degree or certificate with an additional year of high school.



Kalamazoo Valley Community College

Kalamazoo Valley Community College seeks to provide every student with clear, flexible program options that provide a mix of educational skills and experiences that will prepare students for advanced coursework at top universities and meaningful opportunities for employment in a changing world.



Kalamazoo College

Kalamazoo College offers qualified high school students the opportunity to enroll in courses while concurrently enrolled in high school during the fall, winter, and spring terms.



Western Michigan University

Dual enrollment through Early College Programs at WMU provides eligible high school students with credits that may be applied toward high school graduation requirements, as well as a college or university program.



The Kalamazoo Promise

Choosing a career path is one of the biggest and most important decisions you'll ever make. The good news is that The Promise is here to help you find and pursue the career path that fits you best.

Local Career Training Programs



Career Launch Kalamazoo

This modernized Youth Apprenticeship Program that provides flexible occupational training programs that cultivate well-educated, highly skilled workers able to meet the demands of a competitive global economy in careers that are in high demand.



Kalamazoo RESA Career Connect Campus

New in the 2025-2026 school year, students will have the opportunity to participate in programs at the Career Connect Campus (CCC). The inaugural class of students at the CCC will learn from industry experts in a new, state-of-the-art facility.



Teach Kalamazoo

Kalamazoo's Grow Your Own (GYO) Teacher Residency program includes apprenticeships and numerous on-ramps into the teaching profession for undergraduate and graduate students, staff, parents, paraprofessionals, for anyone with an existing bachelor's degree, and/or anyone who is interested in entering the honorable and fulfilling profession of teaching.

Labor Market Tools



Michigan Pathfinder

Pathfinder uses current labor market, wage, and institutional data and metrics to help you create an individualized career roadmap. This free tool provides information to students, parents, and guidance staff to make informed choices about educational and career options.



Pure Michigan Talent Connect

Michigan's free online career exploration tool that provides information on in-demand careers and the degrees or credentials needed to pursue them.

College & Career Exploration and Resources



[Xello Career Exploration](#)

Kalamazoo Public Schools uses the Xello platform so students in grades K-12 can build self-knowledge and explore options beyond high school.



[Michigan Career Development Model](#)

The Michigan Career Development Model (MCDM) is a framework, guided by legislation that engages school communities, students, and their support networks in intentional and meaningful career awareness, exploration, and preparation.



[Advance CTE National Career Clusters Framework](#)

The National Career Clusters® Framework provides a shared structure and language for CTE program design across the United States. The new framework provides meaningful career exploration and preparation experiences through Career Technical Education (CTE) that prepare students for the changing and interconnected world of work.



[Michigan Pathfinder](#)

Pathfinder provides valuable information to help students make informed choices about educational and career options.



[O*NET Online](#)

O*Net provides a collection of resources to inform students' college and career journeys: a Career Exploration Tool, O*NET Interest Profiler, My Next Move, Career One Stop, and Get My Future.



[SAT/PSAT – College Board](#)

The SAT and PSAT are standardized tests meant to show colleges and universities how prepared students are for college by measuring key skills like reading comprehension, computational ability, and clarity of expression.



[EBSCO Learning Express](#)

EBSCO LearningExpress provides online platforms for academic skill building, standardized test preparation, and career-oriented digital content. It helps students prepare for college, explore careers, and accelerate their journey into careers.



[Credential Center](#)

Certifications demonstrate for employers that job candidates have specific skills or knowledge in an occupation, industry, or technology. This site helps students explore training associated with certifications and credentials.



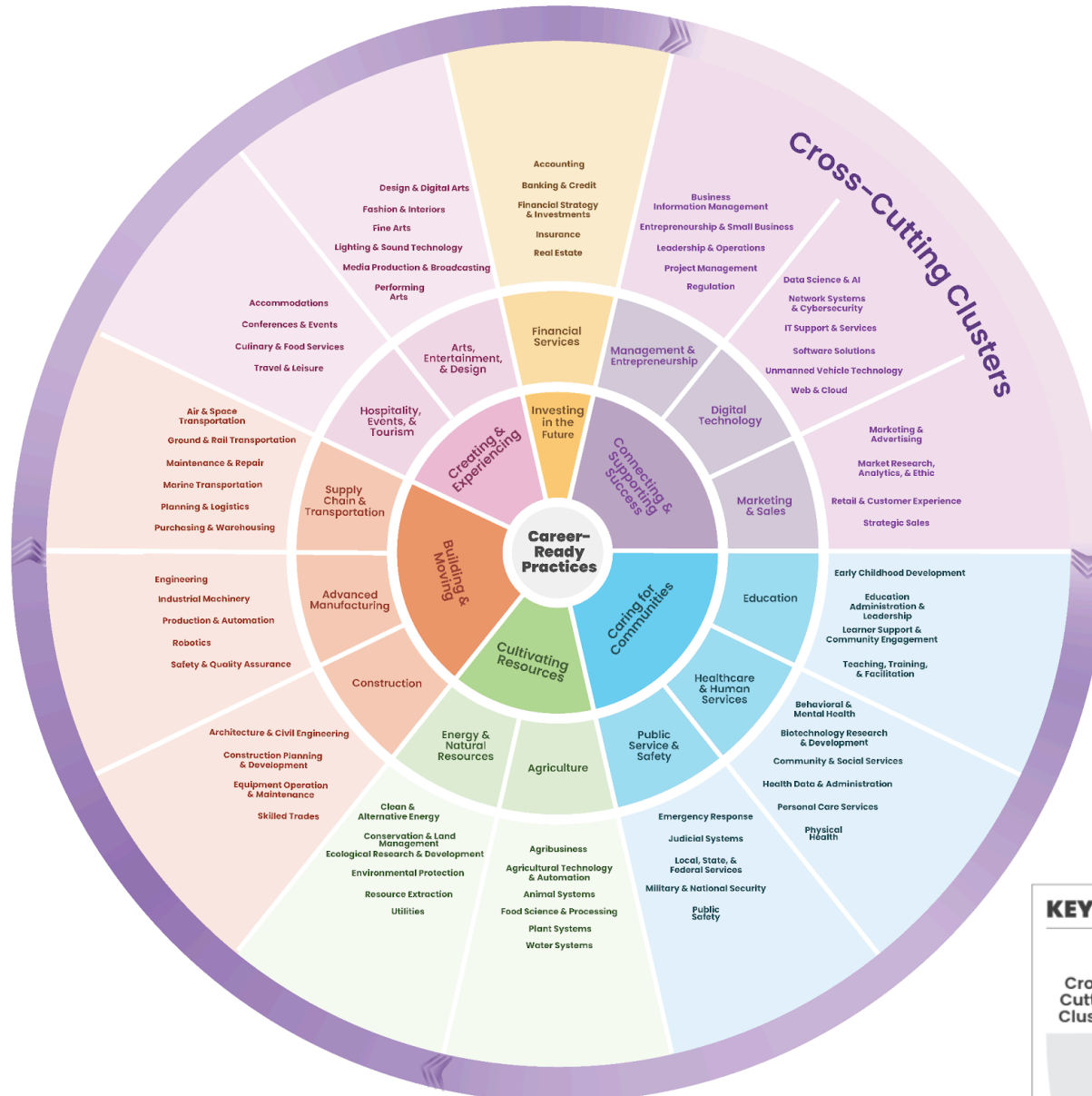
[Apprenticeship USA](#)

Discover apprenticeships across industries, how programs are started by employers, and how to become an apprentice.

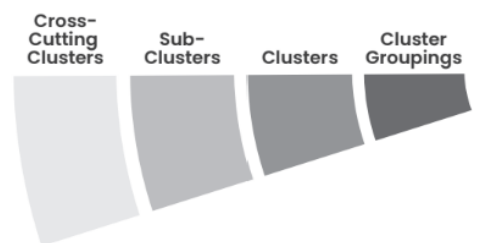


[ASVAB Career Exploration](#)

The Armed Services Vocational Aptitude Battery (ASVAB) is a multiple-aptitude battery that measures developed abilities and helps predict future academic and occupational success in the military.



KEY



Agriculture: Cultivating Sustainability & Nourishing the World

Cluster Definition: The Agriculture Career Cluster concentrates on scientific advancement of agriscience, cultivation, processing, and distribution of agricultural products, employing advanced technologies and sustainable practices to optimize global food systems. This Cluster also supports other plant- and animal-based industries including regenerative agriculture, sustainable logging, and fisheries. This Cluster has meaningful connections with the Energy and Natural Resources Cluster, highlighting a symbiotic relationship that emphasizes stewardship and resilient communities.

Sub-Clusters

Example Programs of Study

Agribusiness: Careers focused on the economic aspects of agriculture, encompassing farm and rangeland management, agribusiness finance, international relations, supply chain management, and other functions that are essential for agricultural profitability. Professionals in this field manage farms and ranches of various scales and oversee agricultural finances, which are crucial functions for profitable and sustainable agricultural enterprises.

Agribusiness
Agricultural Policy
Agricultural Finance

Agricultural Technology & Automation: Careers at the intersection of agriculture and technology, focusing on the design and operation of agricultural equipment and systems; repair and maintenance of agricultural equipment; and agricultural engineering, mechanics, and automation processes. This Sub-Cluster includes innovative farming methods such as precision, urban, and vertical farming to increase efficiency, productivity, and sustainability in agriculture.

Agricultural Technology
Precision Agriculture
Urban Farming
Agricultural Mechanics

Animal Systems: Careers that both promote the health and well-being of animals, including companion, livestock, and exotic animals, and facilitate the efficient production of animal-related products within the food system. For livestock and poultry, professionals in this field aim to optimize the production of meat, dairy, eggs, and other animal products. Careers in this field also include veterinary and other services to manage the care, breeding, behavior, enrichment, and management of animals. This Sub-Cluster also incorporates genetics, nutrition, biotechnology, and pharmaceuticals to improve animal welfare and production efficiency.

Animal Nutrition
Livestock Management
Veterinary Science

Food Science & Processing: Careers centered on applying scientific and technological principles to the development, enhancement, processing, and usability of agricultural food products. Professionals in this field work with fruit, vegetable, grain, and meat processing, ensuring that these products are nutritious and safe for consumption. This Sub-Cluster is crucial in maintaining quality control and nutritional value, enhancing product freshness, and meeting consumer and regulatory standards.

Food Science
Meat Science
Sustainable Food & Farming

Plant Systems: Careers involving the study and management of plant growth, soil health, and pest management, focusing on sustainable crop production for both food and goods. This Sub-Cluster includes careers in agronomy, horticulture, timber and plant fiber harvesting, and soil science that are aimed at enhancing crop yields, preserving soil resources, and developing advanced production practices.

Horticulture
Forestry
Plant Science
Floriculture

Water Systems: Careers centered on the effective management and use of water resources in agricultural settings, including precision irrigation, aquaculture, and fisheries. Professionals in this field are dedicated to maximizing water efficiency and productivity in farming operations to enhance crop yield and support sustainable fish farming practices.

Aquaculture
Marine Biology