Career Education

Student Pathways To Success

Then Now

VOCATIONAL EDUCATION	CAREER EDUCATION
For ***Some*** Students	For ***All*** Students
For a Few ***Jobs***	For All ***Careers***
6 to 7 “Program Areas”	16 Clusters – 81 Pathways
In Lieu of Academics	Aligns and Supports Academics
High School Focused	High School and College Partnerships

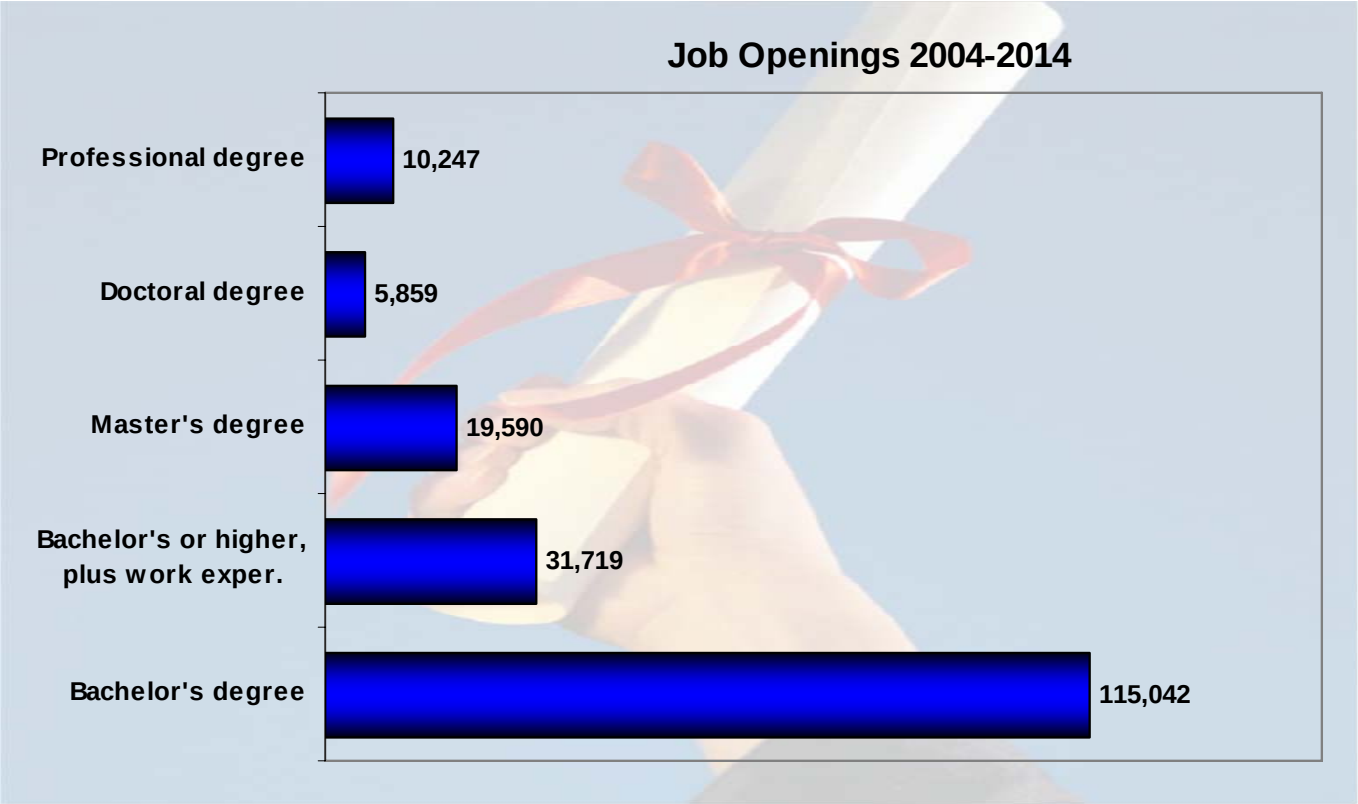
Why Career Education?

Our economy is changing to:

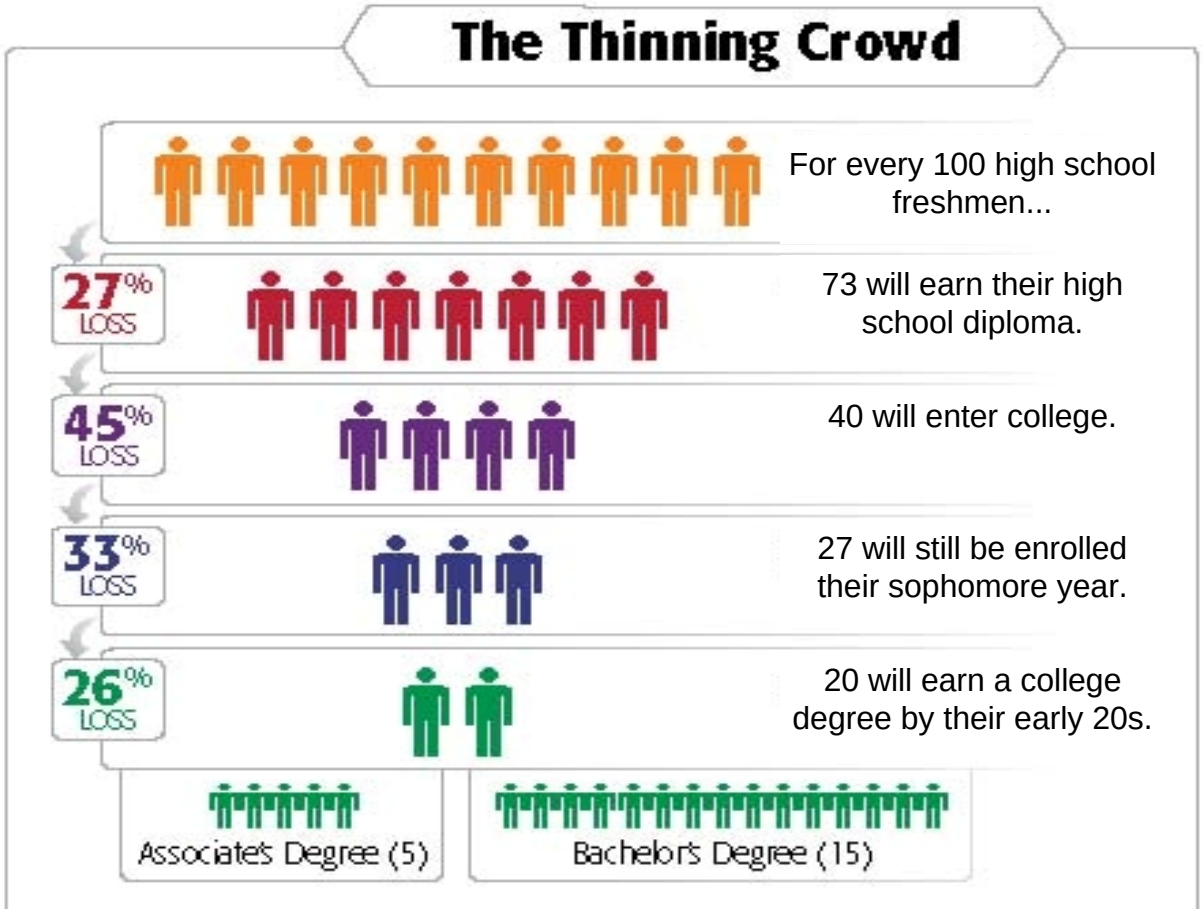
- Technology-driven
- Knowledge-based
- Global
- Increased employer demands

Industry Data

Approximately 1 of every 5 new jobs by 2014 will require a bachelor's degree or higher. *(4 of 5 will not)*



Decreasing Pyramid of Educational Achievement



Other Indicators

- Increasing competition from other countries where students are better prepared
- China graduates twice as many students with bachelor's degrees and six times as many engineering majors as the U.S. India and Singapore are producing scientists through top-notch undergraduate programs. In 2001, India graduated almost a million more students from college than the U.S., including 100,000 more in the sciences and 60,000 more in engineering.
- Employers and college professors grade high school graduates' performance as "average" or "poor" (Am. Diploma Project)
- According to the National Association of Manufacturers, by 2010 there will be an estimated 5.3 million high-skill jobs available to **qualified workers** and 14 million more 10 years later.

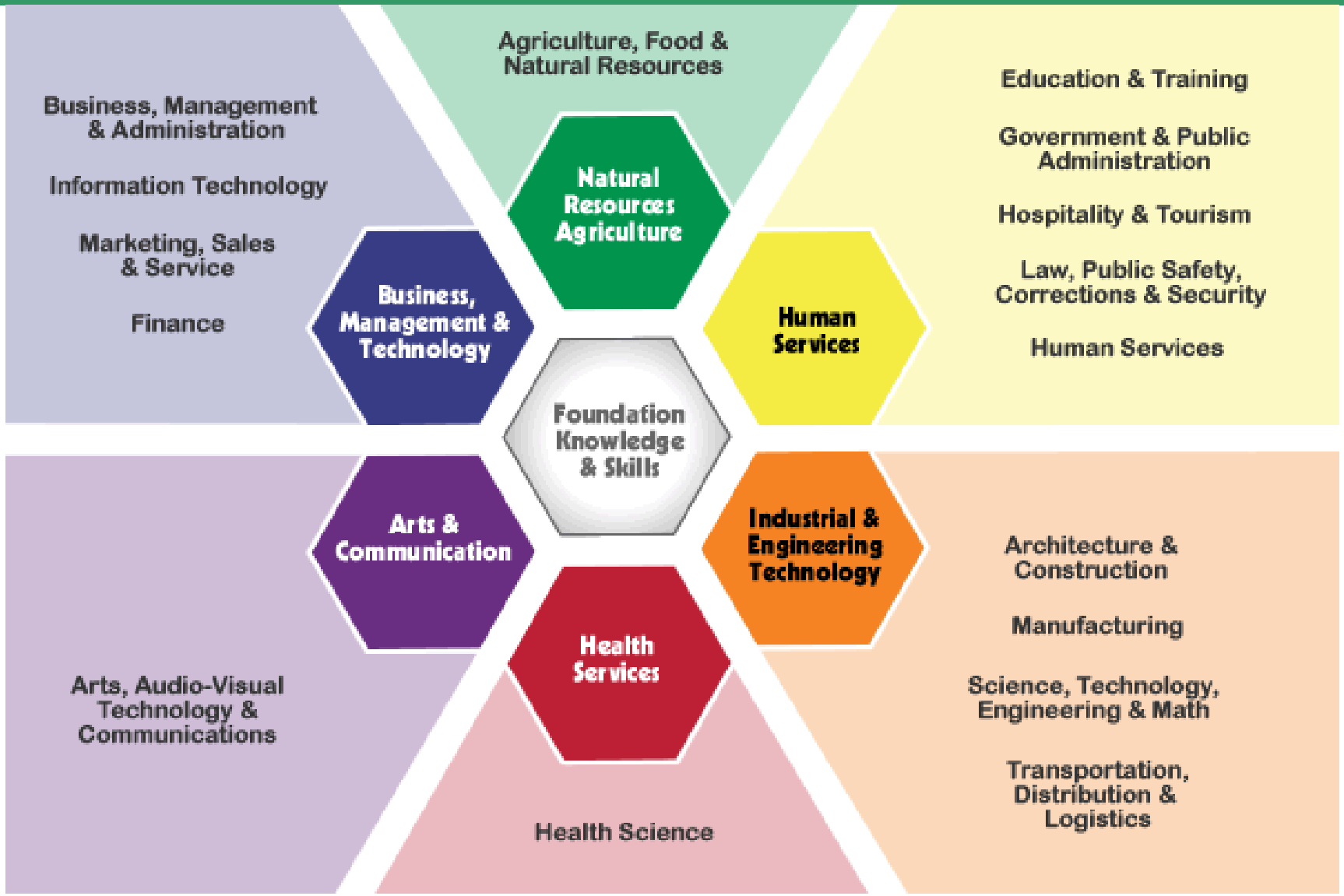
What Does This Mean?

- New vision for education
- Alignment of Career Education to education reform, workforce development and economic development

Four Recommendations

1. Focus on School Career Guidance and Counseling
2. Focus on Rigor, Relevance and Relationships in School Curricula
3. Focus on Student Transitions
4. Focus on High Quality Professional Development

Career Clusters Framework



Career Clusters

A model that:

- Fits our mission to help our students succeed in the workplace, education and life
- Prepares students for a broad range of career options:
  - ✓ Employment
  - ✓ Technical and postsecondary education
  - ✓ Lifelong learning
- Increases our ability to be student-centered, industry-focused, and performance-driven

Career Path


Career Path
Career Cluster
Career Pathway
Program of Study
Personal Plan of Study


Business, Management & Technology
Arts & Communication
Natural Resources Agriculture
Foundation Knowledge & Skills
Health Services
Human Services
Industrial & Engineering Technology

Career Cluster

A Career Cluster is a grouping of occupations and broad industries based on commonalities.

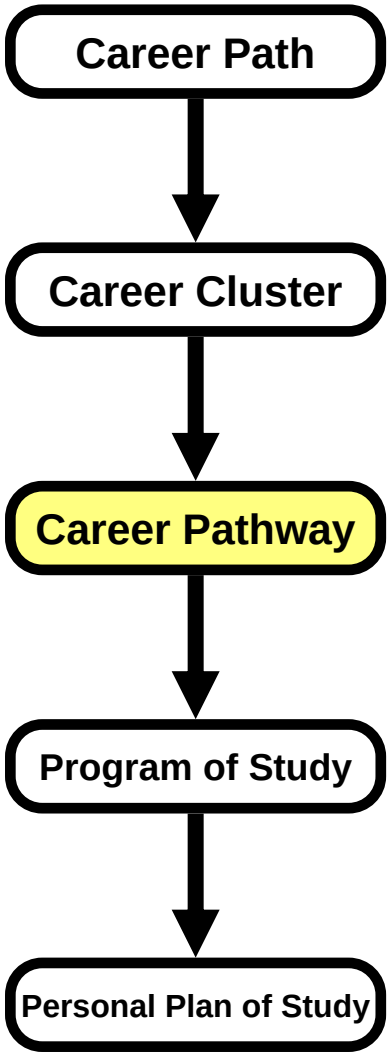
A Career Cluster represents the knowledge and skills, both academic and technical, that all students within the cluster should achieve regardless of their career field.

Knowledge and Skill Statements

Knowledge and skill statements represent the skills and knowledge, both academic and technical, that all students should achieve for a given career area.

■ **Academics**	■ **Technical skills**
■ **Communications**	■ **Leadership and Teamwork**
■ **Problem Solving and Critical Thinking**	■ **Safety, Health and Environment**
■ **Information Technology**	■ **Ethics & Legal Responsibility**
■ **Systems**	■ **Employability and Career Development**

Career Pathway



A Career Pathway represent a grouping of occupations within a cluster based on commonalities.

For example, there are 3 career pathways within the Education and Training Career Cluster:

- Administration and Administrative Support
- Professional Support Services
- Teaching and Training

Programs of Study

A full range of activities, documents and process that make up a seamless education program from school to school within a given Career Cluster or Career Pathway.

Includes a three-part curriculum framework extending from secondary to two-year postsecondary to four-year postsecondary education.

Sample Program of Study

Agriculture, Food & Natural Resources

SAMPLE

Agriculture, Food and Natural Resources: Agribusiness Systems

Career Pathway Plan of Study for ▶Learners ▶Parents ▶Counselors ▶Teachers/Faculty

*This Career Pathway Plan of Study (based on the Agribusiness Systems Pathway of the Agriculture, Food and Natural Resources Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.*

EDUCATION LEVELS	GRADE	English/ Language Arts	Math	Science	Social Studies/ Sciences	Other Required Courses Other Electives Recommended Electives Learner Activities	*Career and Technical Courses and/or Degree Major Courses for Agribusiness Systems Pathway	SAMPLE Occupations Relating to This Pathway
	Interest Inventory Administered and Plan of Study Initiated for all Learners							
SECONDARY	9	English/ Language Arts I	Algebra I	Earth or Environmental Science	State History Civics	All plans of study should meet local and state high school graduation requirements and college entrance requirements. Supervised Agricultural Experience (SAE) and participation in appropriate FFA activities support and reinforce classroom and laboratory learning and should be a requirement for all students.	· Introduction to Agriculture, Food and Natural Resources	**Occupations Requiring Postsecondary Education** ▶ Agricultural Chemical Dealer ▶ Agricultural Products Buyer-Distributor ▶ Bank/Loan Office ▶ Dairy Herd Supervisor ▶ Entrepreneur ▶ Farm Manager ▶ Farmer-Rancher-Feedlot Operator ▶ Feed-Supply Store Manager ▶ Field Representatives for Bank, Insurance Company or Government Program ▶ Livestock Manager ▶ Sales Manager ▶ Salesperson **Occupations Requiring Baccalaureate Degree** ▶ Agricultural Commodity Broker ▶ Agricultural Economist ▶ Agricultural Educator ▶ Agricultural Lender ▶ Banker/Loan Officer ▶ Farm Investment Manager ▶ Produce Commission Manager
SECONDARY	10	English/ Language Arts II	Geometry	Biology	U.S. History		· Introduction to Agricultural Marketing, Business and Entrepreneurship · Accounting	
SECONDARY	11	English/ Language Arts III	Algebra II or other math course	Chemistry or other science course	World History		· Agricultural Business Management	
	College Placement Assessments-Academic/Career Advisement Provided							
SECONDARY	12	English/ Language Arts IV	Statistics or other math course				· Agricultural Economics · Internship in Agribusiness	
	Articulation/Dual Credit Transcripted-Postsecondary courses may be taken/moved to the secondary level for articulation/dual credit purposes.							
POSTSECONDARY	Year 13	English Composition	Algebra	Chemistry	American Government	All plans of study need to meet learners' career goals with regard to required degrees, licenses, certifications or journey worker status. Certain local student organization activities may also be important to include.	· Introduction to Agribusiness · Principles of Agribusiness · Agricultural Economics	
POSTSECONDARY	Year 14	Speech/ Oral Communication		Biological Science or Botany	American History Geography		· Agricultural Salesmanship · Agricultural Finance · Agricultural Advertising/Merchandising	
POSTSECONDARY	Year 15	Technical Writing	Statistics		Psychology		· Continue Courses in the Area of Specialization	
POSTSECONDARY	Year 16	Continue courses in the area of specialization.					· Complete Agribusiness Systems Major (4-Year Degree Program)	

League for Innovation CCTI College and Career Transitions Initiative NCTEF

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SAMPLE

Personal Plan of Study

A student's scope and sequence of coursework and co-curricular experiences based upon chosen educational and career goals.

Arranged according to secondary graduation requirements and postsecondary admissions requirements.

Required of all students in grades 9-12 and is to be reviewed annually.

Personal Plan of Study (sample)

Career Path: Natural Resources/ Agriculture

Career Cluster: Agriculture, Food & Natural Resources

Career Field:

Date: _____

Student Name: _____

Student Signature: _____

Advisor Signature: _____

Parent/Guardian Signature (if required):

_____

	9th Grade	*10th Grade*	*11th Grade*	*12th Grade**
High School	English I	English II	English III	English IV
	Algebra I or Geometry	Geometry or Algebra II	Algebra II, Trigonometry or Pre-Calculus	Trigonometry, Pre-Calculus or Calculus
	Physical Science or Biology I	Biology I or Chemistry I	Chemistry I, Physics, or Environmental Science	Physics, AP Biology or Environmental Science
	Geography/State History	World History	American History	Economics/Government
	PE/Health or Fine Arts	PE/Health or Fine Arts		Personal Finance
				Practical Art (if needed)
	Career Field Elective(s) Agricultural Science I	***Career Field Elective(s)*** Agricultural Science II	***Career Field Coursework:*** Agribusiness Sales/Marketing/Management Agricultural Construction Agricultural Machinery Agricultural Management & Economics Agricultural Power I Agricultural Power II Agricultural Structures Animal Science Conservation of Natural Resources Crop Science	Floriculture Food Science and Technology Forest Management Fruit and Vegetable Production Greenhouse Operation & Management Landscaping Nursery Operation & Management Processing/Marketing Forestry Products Supervised Agricultural Experience Co-op Turf Management
	Additional Coursework Foreign Language or Computer Technology	***Additional Coursework*** Foreign Language or Computer Technology		

Personal Plan of Study (sample)

	Area Career Center	Community College	College/University	Other
Postsecondary	❑ Farm Diesel Equipment ❑ Horticulture	❑ Agricultural Business ❑ Agricultural Mechanics ❑ Biotechnology ❑ Commercial Turf & Golf Course Management ❑ Custom Application Technology ❑ Equine Science ❑ Farm Management ❑ Horticulture ❑ Natural Resources ❑ Veterinary Technology	❑ Agricultural Business Management ❑ Agricultural Economics ❑ Agricultural Education ❑ Agricultural Journalism ❑ Agricultural Systems Management ❑ Agriculture, General ❑ Biochemistry ❑ Education ❑ Fisheries and Wildlife ❑ Food Science and Nutrition ❑ Forestry ❑ Hotel and Restaurant Management ❑ Parks, Recreation, and Tourism ❑ Plant Science ❑ Soil and Atmospheric Sciences	❑ Apprenticeship ❑ Military ❑ On-the-Job Training

	Work-based Learning Opportunities	Relevant High School Intra-Curricular/Co-Curricular Experiences	Graduation Exams
Career Enhancement Options	After School Employment Cooperative Occupational Experience Internship/Mentorship Job-Shadowing On-The-Job Training Service Learning Supervised Agricultural Experience (Required)	Career and Technical Student Organization: FFA Other high school activities:	___U.S. Constitution ___MO Constitution

Adapted from National Career Cluster

*12th grade year should include at least 3 academic courses including college prep math or science.

Note: All Career and Technical Education courses count as a practical arts credit.

In Summary---

Benefits for Educators

- More engaged learners
- Broader community support
- Structure for true integrated teaching and learning
- Enhanced achievement for all students
- Makes teaching fun by applying all knowledge – both academic and technical

Benefits for Employers

- Building a pipeline of workers
- Workforce is well qualified and able to adapt to the changing needs
- Meaningful engagement with the school system
- Framework for cross-training or re-tooling the workforce

Benefits for Parents

- More informed options
- Smoother transitions among learner levels
- Potential savings – integrated credit and articulation agreements
- More focused and engaged students

Benefits for Learners

- Relevancy
- Durable technical preparation
- Opportunities to explore multiple careers
- Connected, seamless transitions
- More engaged learning

Career Clusters Can Help…

- Reduce the need for remedial studies in college
- Increase enrollment and persistence in postsecondary education
- Raise academic and technical achievement in high school and college

…continued

- Increase the percentages of students receiving postsecondary degrees, certificates or other recognized credentials

- Improve students’ chances of getting good jobs and pursuing further education