

Part 1

Career-Connected Learning

How to easily align & integrate career-connected learning strategies



“To find out what one is fitted to do, and to secure an opportunity to do it, is the key to happiness.”

— John Dewey

WHO

Dr. Joseph Goins, CEO & Founder

Ricky Williams, Director of State Partnerships

WHAT

We create career-connected learning solutions for high-value results.

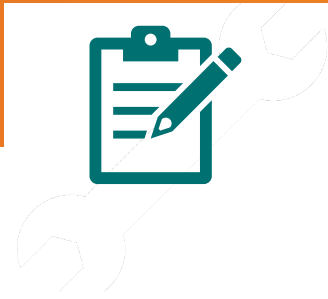
WHY

When a student can see it. They can be it.



RESEARCH

Supporting education initiatives and priorities with **actionable research**



POLICY

Validating policy issues in K-12, Post Secondary and Business



PRACTICE

Data-informed and evidence-based practices to create a **robust career readiness model**



In today's world, twenty-first-century skill demands are steadily increasing.

Most high-paying jobs require additional education and training beyond a high school diploma.

We must make sure that our children, **particularly those who are traditionally underserved**, are prepared for and have access to postsecondary education.

Gov. Bob Wise,

Alliance for Excellent Education

Gaps in Career Readiness



How well are we preparing students?

The Gap Between Education and Industry



43%

Of students starting postsecondary programs do NOT earn a degree in 6 years.



13%

Of students from the lowest income quartile earn a bachelor's degree in 6 years.



41%

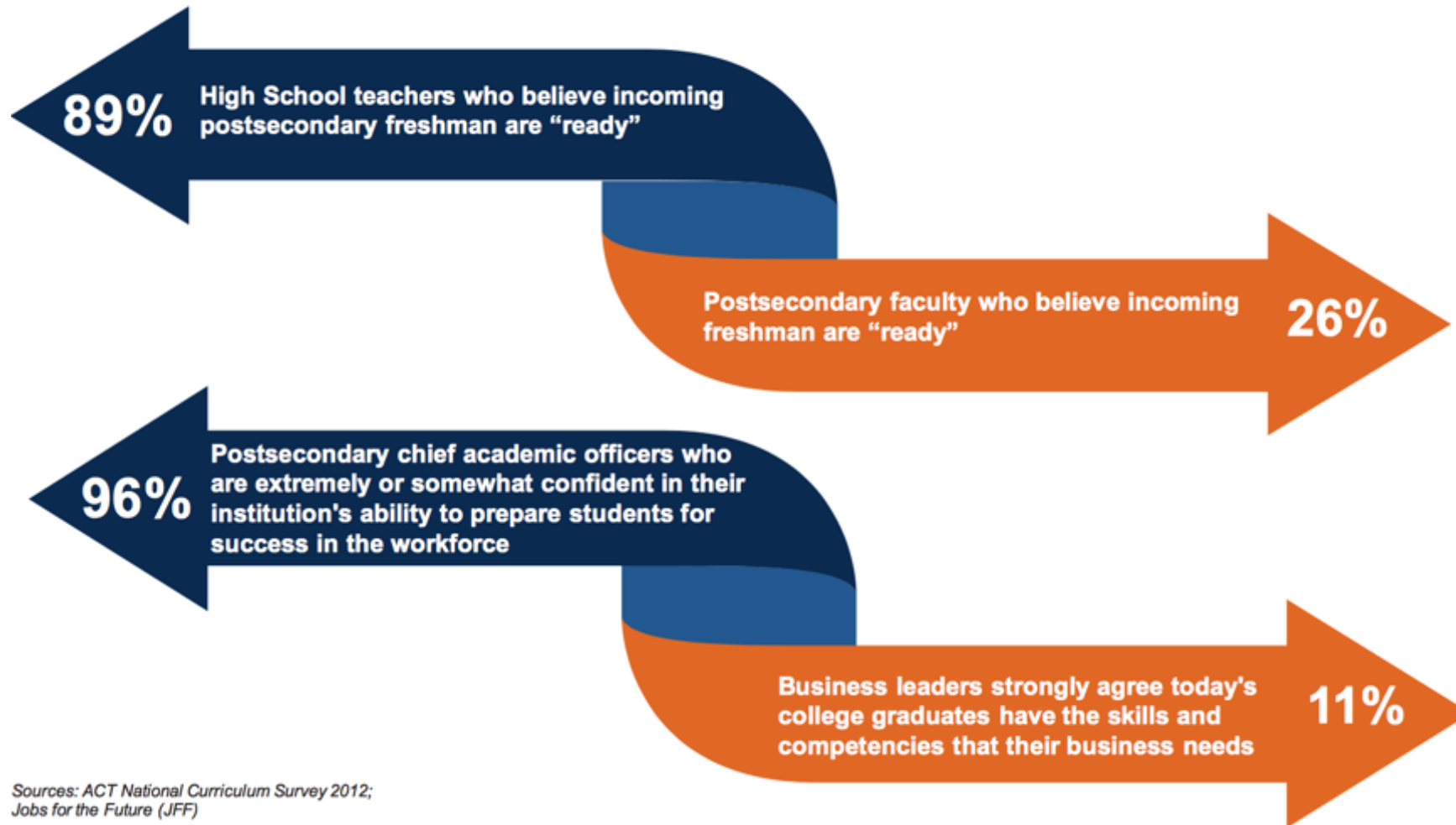
Of recent grads are **underemployed** or working jobs that do not require a college degree.



74%

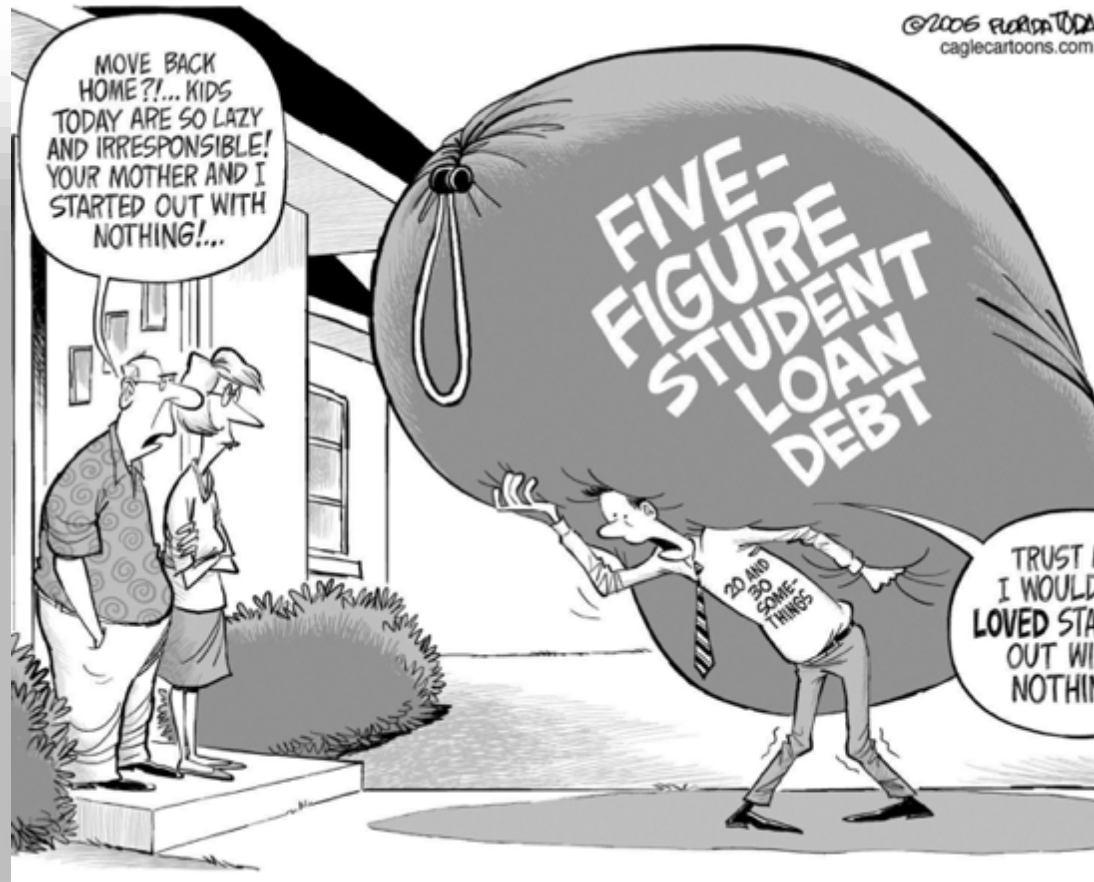
Of hiring managers agree that a '**skills gap**' persists in the current US labor and hiring economy.

Mismatch in “Readiness”



Sources: ACT National Curriculum Survey 2012;
Jobs for the Future (JFF)

Long Term Impact of Not Getting It Right



A collage of news articles related to student loan debt. At the top right is the "Economix" logo with the tagline "Explaining the Science of Everyday Life". Below it is an article titled "Only Half of First-Time College Students Graduate in 6 Years" by Catherine Rampell, dated February 26, 2013. Another article from Businessweek is titled "Student Loans, the Next Big Threat to the U.S. Economy?" dated January 16, 2014. A third article is titled "Billion student loan debt widens US wealth gap" dated Thursday, Mar. 27, 2014. The collage also includes a small photo of a woman and some text fragments like "month that Gregory Zbylut pays \$1,300 toward his law school" and "toward their student loans".

Perkins V

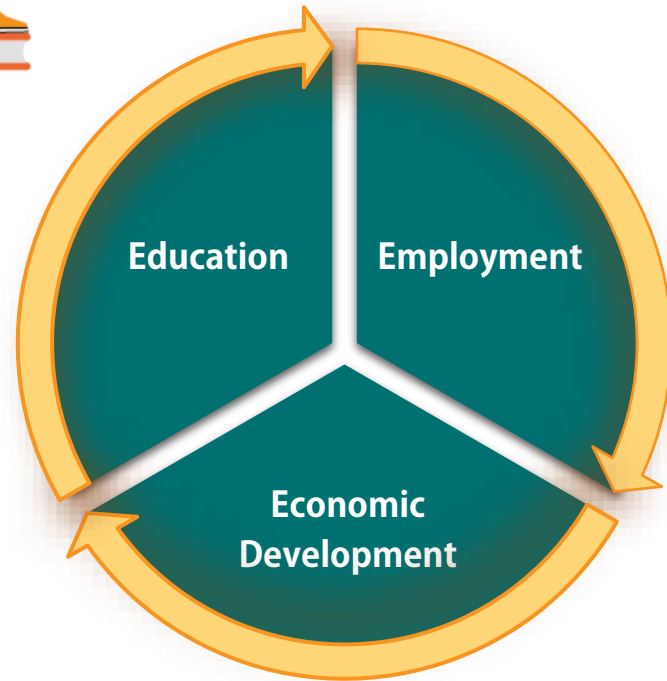
Perkins V represents an important opportunity to **expand opportunities for every student** to explore, choose, and follow career and technical education programs of study and career pathways to earn credentials of value.

PERKINS V TIMELINE

ADVANCE CTE
State Leaders Connecting Learning to Work



Create Connections



To facilitate growth and development among individuals and communities, **change is needed both within and between these areas.**



Career Readiness

Aligning career-connected learning

Program Alignment

Aligning Career-Connected Learning



Assess Needs

Use valuable data to **diagnose needs** and **establish policies** for effective career resources

Plan

Develop and **prioritize strategies** that align to your vision and ensure students have the skills needed for **workplace success**

Operationalize

Extend plans to reach and **engage stakeholders** including teachers and students

Maintain Momentum

Support ongoing success through community communications and **stakeholder involvement**

Assess Needs



Data-Informed Strategies for Career-Connected Learning

Career-Connected Learning Worksheet

Common Data Points	Where is the data source and location?	Who is responsible for collecting?	How often is it collected or updated?	Scale Rating: 1-5	
				How relevant is this measure to our strategic vision?	How relevant is this measure to our stakeholders?
Perkins V – Comprehensive Local Needs Assessment					
Enrollment in CTE Programs					
First-year postsecondary retention and performance					
Engagement of career exploration programs					

Making it Meaningful



Align programs to high-value careers

Program Evaluation Worksheet

	Not Yet Started	Somewhat Complete	Complete	N/A
1. Establish a criteria for career-connected learning initiatives				
2. Create a list of programs and initiatives for evaluation				
3. Categorize programs and initiatives based on career-connected learning				
4. Choose programs to infuse career-connected learning				
5. Establish key performance indicators				
6. Select new programs and initiatives				
7. Prepare operational plan for implementation				

Putting it into Practice



Align and Integrate Career-Connected Learning

Data-Informed Decisions

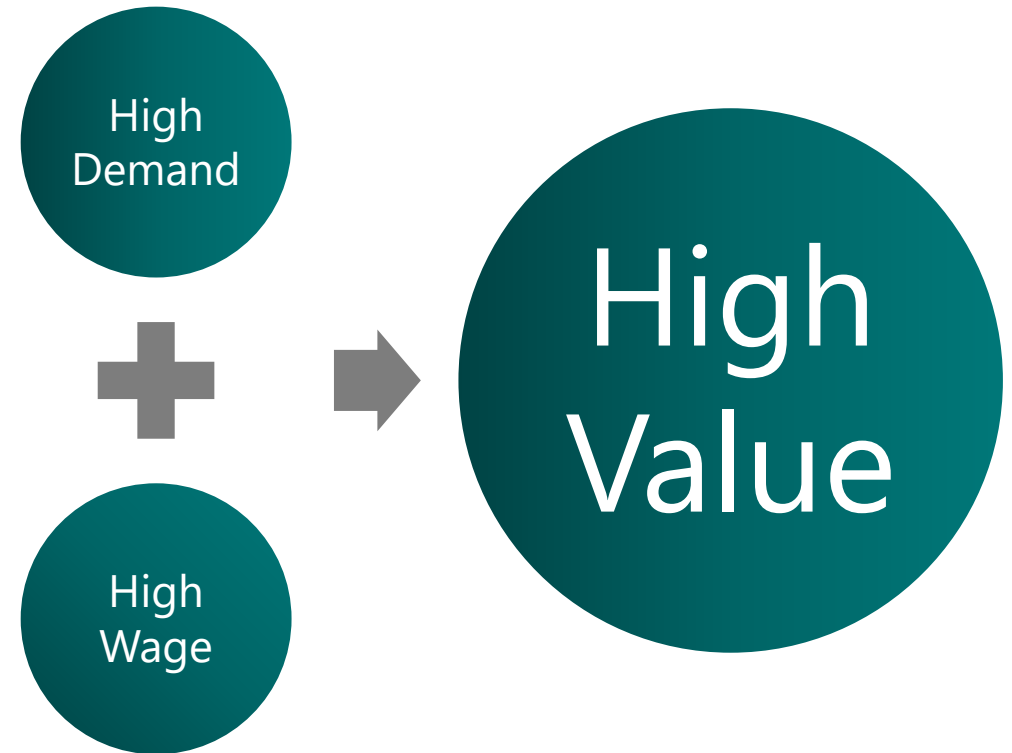


■ Assess Needs

- **Explore high-value careers** for sixteen career clusters
- **Understand programs** associated with high-value careers in each cluster
- Information to **evaluate current programs** and develop plans for adding, revising, or removing programs
- **Align programs** to high-value careers

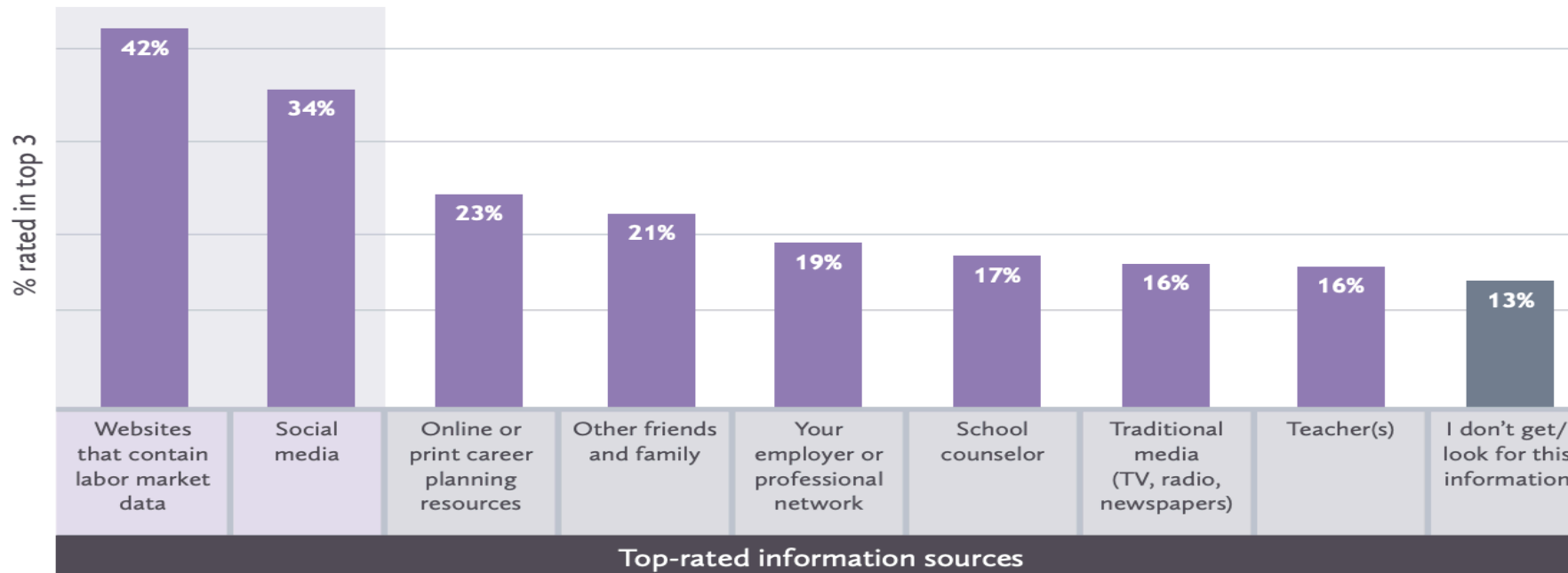
Labor Market Information

- Use labor market data to **understand career destinations** for students in their local areas.
- **Identify occupations** expected to be high in demand and wage.
- **Align education practices** with critical skills.
- **Prioritize learning opportunities** that prepare students for good jobs in their communities.



Where do students learn about Careers?

Figure N. Where do young adults seek information about demand and wages for different career options?



Given that young adults rely on these self-directed information gathering activities, schools, policymakers and other stakeholders have an opportunity to compile and present labor market information for students in ways that will better reach them. In doing so, they also have the potential to help students learn how to evaluate the information they gather and to contextualize it with available education opportunities and pathways.

Making the Complicated Simple

Education with Destination

HOME EXPLORE YOUR STATE EXPLORE CAREER CLUSTERS REPORTS PREVIEW CUSTOM SOLUTIONS CONTACT US

Welcome to the P2C Policy Dashboard

Get Started

Explore Your State

Explore

Explore Career Clusters

Explore

Explore Labor Market Reports

Explore

This screenshot shows a website interface for the P2C Policy Dashboard. The background features a collage of images: a young woman sitting on a ledge reading, a group of students in a classroom, a man looking at a server rack, a woman in a hard hat looking at a data display, and a woman in a lab coat. The navigation menu at the top includes 'HOME', 'EXPLORE YOUR STATE', 'EXPLORE CAREER CLUSTERS', 'REPORTS', 'PREVIEW CUSTOM SOLUTIONS', and 'CONTACT US'. The main content area is divided into four sections, each with a title and a 'Get Started' or 'Explore' button: 'Welcome to the P2C Policy Dashboard', 'Explore Your State', 'Explore Career Clusters', and 'Explore Labor Market Reports'.

P2C Policy & Solutions

HOME DISCOVER YOUR INTERESTS EXPLORE YOUR AREA EXPLORE CAREER CLUSTERS NEWS CONTACT

NEW MEXICO

EDUCATION WITH DESTINATION

WELCOME TO NEW MEXICO

GET STARTED

This screenshot shows a website interface for the P2C Policy Dashboard, specifically for New Mexico. The background features a large image of a desert landscape with a prominent rock formation under a blue sky. The navigation menu at the top includes 'HOME', 'DISCOVER YOUR INTERESTS', 'EXPLORE YOUR AREA', 'EXPLORE CAREER CLUSTERS', 'NEWS', and 'CONTACT'. The main content area is divided into two sections: a large header with the text 'EDUCATION WITH DESTINATION' and a smaller section below with the text 'WELCOME TO NEW MEXICO' and a 'GET STARTED' button.

TSBA DISTRICT DATA DASHBOARD

HOME YOUR COMMUNITY JOBS IN YOUR REGION SCHOOL PERFORMANCE SCHOOL FUNDING DISCOVER YOUR INTERESTS CONTACT US

TENNESSEE

WELCOME TO THE TSBA DISTRICT DATA DASHBOARD

WHAT DOES YOUR COMMUNITY LOOK LIKE? CLICK HERE

WHAT AND WHERE ARE THE JOBS IN YOUR REGION? CLICK HERE

HOW IS YOUR SCHOOL PERFORMING? CLICK HERE

HOW IS YOUR SCHOOL FUNDED? CLICK HERE

This screenshot shows a website interface for the TSBA District Data Dashboard, specifically for Tennessee. The background features a large image of a classroom with students. The navigation menu at the top includes 'HOME', 'YOUR COMMUNITY', 'JOBS IN YOUR REGION', 'SCHOOL PERFORMANCE', 'SCHOOL FUNDING', 'DISCOVER YOUR INTERESTS', and 'CONTACT US'. The main content area is divided into several sections: a header with the text 'WELCOME TO THE TSBA DISTRICT DATA DASHBOARD', a sub-header with the text 'TSBA DISTRICT DATA DASHBOARD', and four buttons with the text 'WHAT DOES YOUR COMMUNITY LOOK LIKE?', 'WHAT AND WHERE ARE THE JOBS IN YOUR REGION?', 'HOW IS YOUR SCHOOL PERFORMING?', and 'HOW IS YOUR SCHOOL FUNDED?', each with a 'CLICK HERE' button.

Alignment Resources



Resource Center

Explore resources to help you align priorities, improve programs, and facilitate conversations that will create positive educational and economic impact in your state.

Local High-Value Careers
High-Value Careers are high-wage careers that are stable or growing in demand

School Name:
School District:
Workforce Region:



Business Management and Administration

Occupation	Annual Openings	Median Wages	Career Pathway	Information Link



Education and Training

Occupation	Annual Openings	Median Wages	Career Pathway	Information Link



FEATURED RESOURCES

How to use P2C
[VIEW RESOURCE](#)

Introduction to LMI
[VIEW RESOURCE](#)

Intersection: Education + Industry
[VIEW RESOURCE](#)

Career Cluster _____ Career Pathway _____

HS Year	English Language Arts	Math	Science	Social Studies	Other Courses	Local Districts and Schools
9						
10						
11						
12						

Year	CTE Courses	Districts	Regional Postsecondary Schools
9			Certificate and Associate's Degree
10			Bachelor's and Advanced Degrees
11			
12			

Postsecondary Programs / Majors

- Certificate or AA
- Bachelor's Degree
- Advanced Degree

NS4ed™ Pathways/Careers™ 2018 Trademark NS4ed, LLC

Align Programs



■ Plan for Career-Connected Learning

- **Establish criteria** to select career-connected learning initiatives
- **List existing programs** offering career-connected learning
- Identify areas to **infuse career-connected learning**
- **Select new programs** and initiatives to motivate, engage, and align to your strategic vision

CCL Programs Should Include

- ✓ Meaningful **learning experiences**
- ✓ Clear and **accurate information** about local career opportunities
- ✓ Upscale learning efforts to teach **valued skills**





Because connecting
students to their
interests and **career**
paths matter



How can **relevance be increased** while supporting the pathway to postsecondary success for all students, particularly those traditionally underserved?

HIGH SCHOOL DISENGAGEMENT

The 2012 Gallup Student Poll asked students how involved and enthusiastic they feel about school. Nearly eight in 10 elementary students reported high engagement. **By high school, only half that many did.**

A vertical pencil graphic with a blue eraser at the top and a sharp lead tip at the bottom. The pencil has a yellow body with blue and red spiral bands.

ELEMENTARY SCHOOL

76%

MIDDLE SCHOOL

61%

HIGH SCHOOL

44%

Understanding Motivation

Table 4
Strategy effect sizes from meta-regression model.

Strategy	Effect size
Career Development/Job Training	0.81
Family Engagement	0.67
Mentoring	0.63
Behavioral Intervention	0.46
Literacy Development	0.42
Work-Based Learning	0.26
School/Classroom Environment	0.25
Service-Learning	0.21
Health and Wellness	0.18
Academic Support	0.11



<http://www.dropoutprevention.org/meta-analysis-dropout-prevention-outcome-strategies/>

When students experience **purpose** in their learning...

Motivation to Learn

(Frymier & Shulman, 1995; Jang, 2008)

Interest and Engagement

(Assor, Kaplan, & Roth, 2002; Hulleman, Godes, Hendricks, & Harackiewicz, 2010; Hulleman & Harackiewicz, 2009)

Effort and Persistence

(Trautwein & Ludtke, 2007; Yeager et al., 2014)

Education

Career

Task/Course Completion

(Fortenberry, Sullivan, Jordan, & Knight, 2007; Zusho, Pintrich, & Coppola, 2003)

Performance

(Hulleman et al., 2010; Hulleman & Harackiewicz, 2009; Malka & Covington, 2005)

Retention of New Information

(Perin, 2001; Yeager et al., 2014)

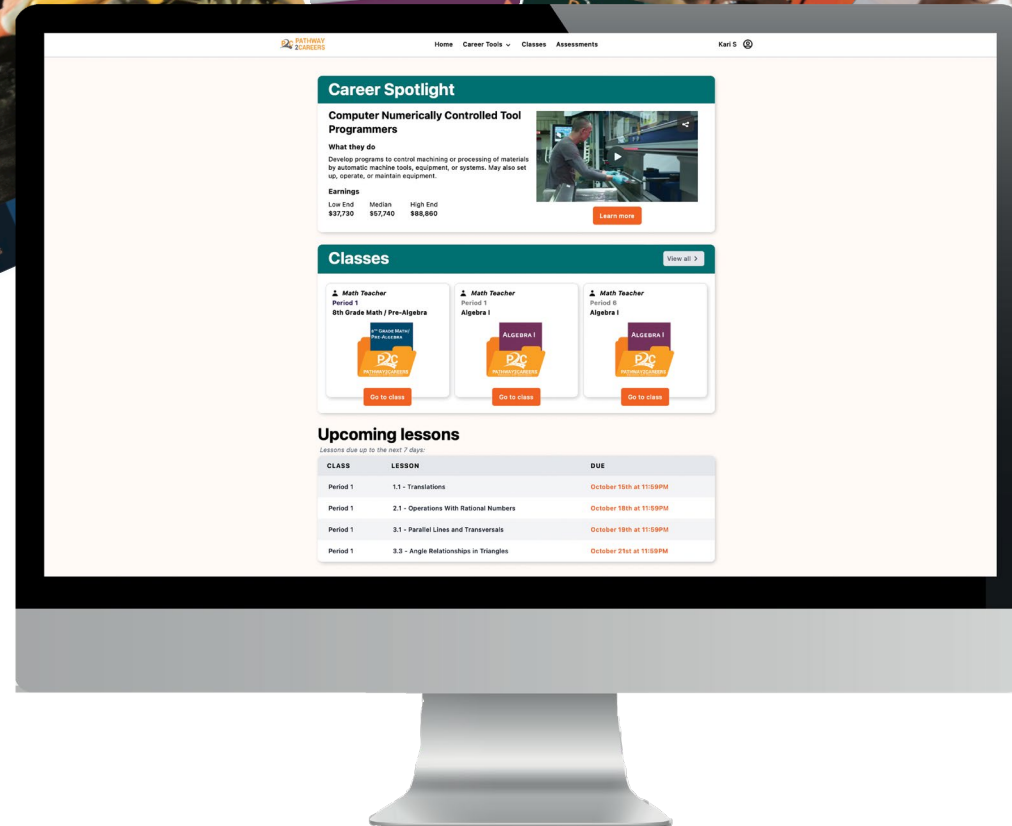
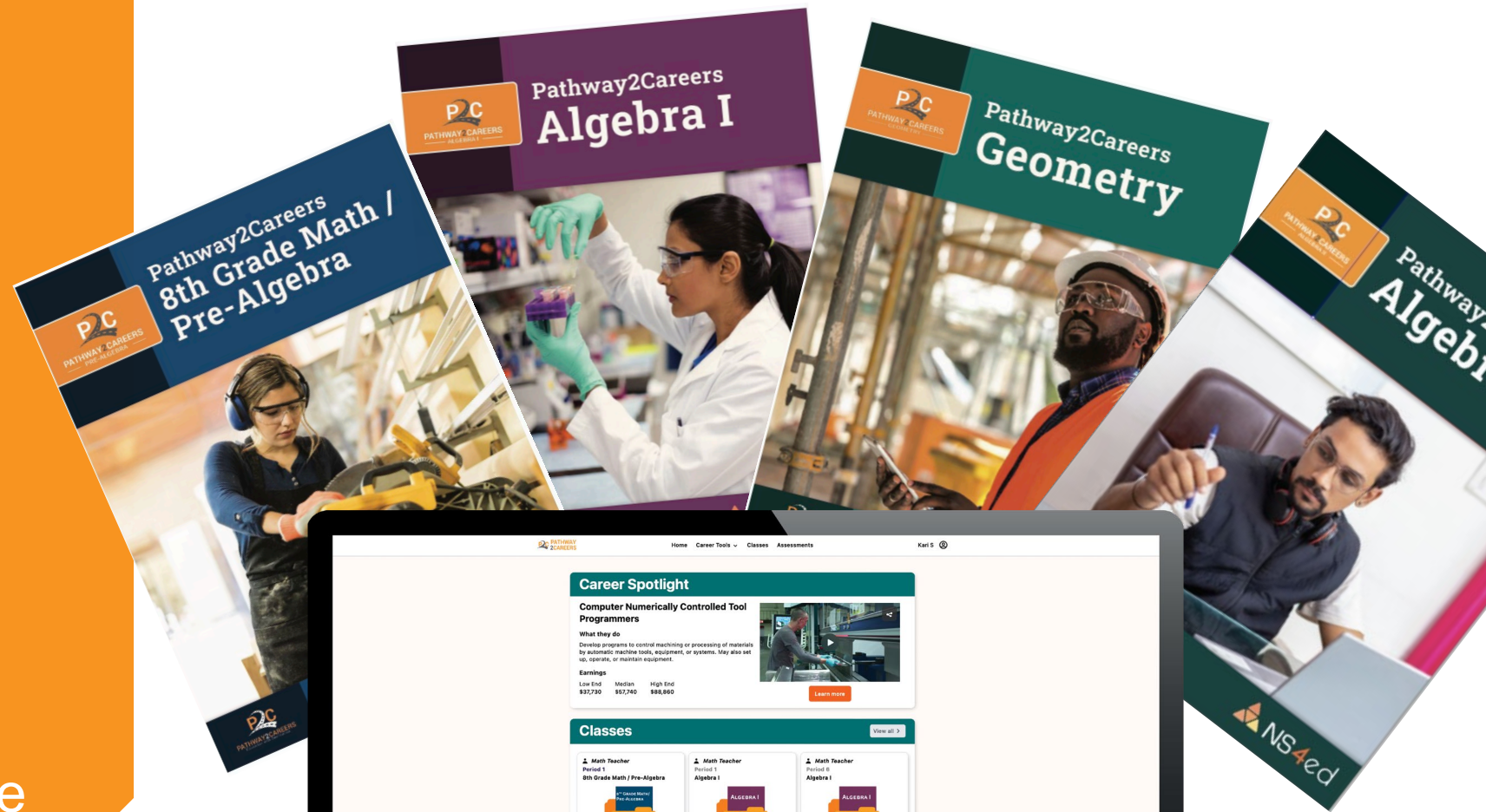
Pathway2Careers Curriculum

- Connect math to authentic **career situations** and provide purpose in math learning.
- Over **650 careers introduced** in math curricula



Objectives

- Students understand the value of math skills in the workplace
- Students benefit from career exposure
- Students develop purpose in learning



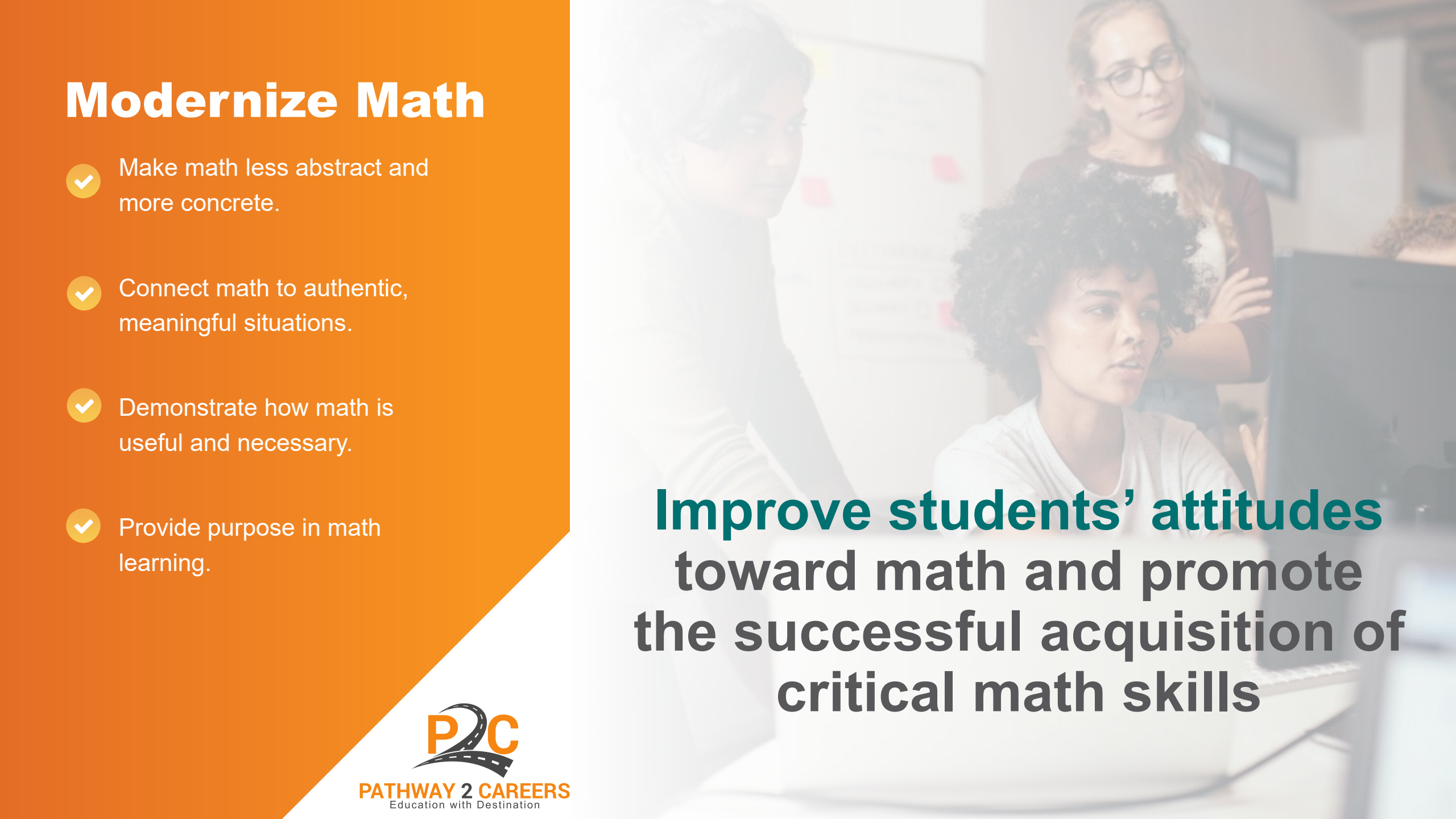
Sample Lesson

The image displays a sample lesson from the Pathway2Careers 8th Grade Math / Pre-Algebra curriculum. It features three main components:

- Book Cover:** Titled "Pathway2Careers 8th Grade Math / Pre-Algebra", it shows a student in a factory setting.
- Lesson Page:** "LESSON 4.8 Apply Graphs of Proportional Relationships". It includes a "CAREER SPOTLIGHT: Manufacturing Engineers" section with an "Occupation Description" and "Career Outlook" (Low-End Salary: \$57,950; Median Salary: \$88,950; High-End Salary: \$136,930).
- Computer Monitor:** Displays the lesson content on a website, showing a sidebar with "Pre-Algebra, Lesson 4.8: Apply Graphs of Proportional Relationships" and a main content area with a video and text about industrial engineers.

Modernize Math

- ✓ Make math less abstract and more concrete.
- ✓ Connect math to authentic, meaningful situations.
- ✓ Demonstrate how math is useful and necessary.
- ✓ Provide purpose in math learning.



Improve students' attitudes toward math and promote the successful acquisition of critical math skills

Informed Career Decision

- Work Interests
- Work Values
- Lifestyle Aspirations

Personal Factors

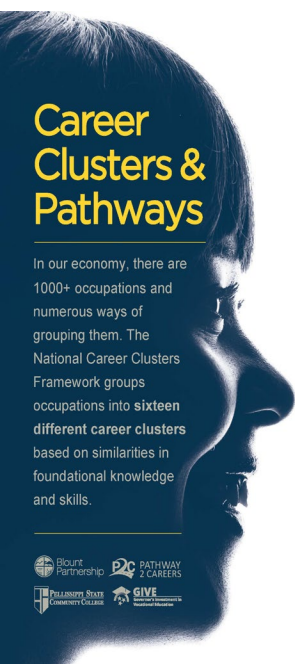


- Job Market Trends
- High-Value Careers
- Local Job Opportunities

External Factors



Career Cluster Maps



Career Clusters & Pathways

In our economy, there are 1000+ occupations and numerous ways of grouping them. The National Career Clusters Framework groups occupations into sixteen different career clusters based on similarities in foundational knowledge and skills.

<p>Agriculture, Food & Natural Resources</p> <ul style="list-style-type: none"> Agribusiness Systems Animal Systems Environmental Service Systems Food Products & Processing Systems Natural Resources Systems Plant Systems Power, Structural & Technical Systems 	<p>Government & Public Administration</p> <ul style="list-style-type: none"> Foreign Service Governance National Security Planning Public Management & Administration Regulation Revenue & Taxation 	<p>Manufacturing</p> <ul style="list-style-type: none"> Health, Safety & Environmental Assurance Logistics & Inventory Control Maintenance, Installation & Repair Manufacturing Production Process Development Production Quality Assurance
<p>Architecture & Construction</p> <ul style="list-style-type: none"> Construction Design/Pre-Construction Maintenance/Operations 	<p>Health Science</p> <ul style="list-style-type: none"> Biotechnology Research & Development Diagnostic Services Health Informatics Support Services Therapeutic Services 	<p>Marketing</p> <ul style="list-style-type: none"> Marketing Communications Marketing Management Marketing Research Merchandising Professional Sales
<p>Arts, A/V Technology & Communication</p> <ul style="list-style-type: none"> A/V Technology & Film Journalism & Broadcasting Performing Arts Printing Technology Telecommunications Visual Arts 	<p>Hospitality & Tourism</p> <ul style="list-style-type: none"> Lodging Recreation, Amusements & Attractions Restaurants & Food/Beverage Services Travel & Tourism 	<p>Science, Technology, Engineering & Mathematics</p> <ul style="list-style-type: none"> Engineering & Technology Science & Mathematics
<p>Business, Management & Administration</p> <ul style="list-style-type: none"> Administrative Support Business Information Management General Management Human Resources Management Operations Management 	<p>Human Services</p> <ul style="list-style-type: none"> Consumer Services Counseling & Mental Health Services Early Childhood Development & Services Family & Community Services Personal Care Services 	<p>Transportation, Distribution & Logistics</p> <ul style="list-style-type: none"> Facility & Mobile Equipment Maintenance Health, Safety & Environmental Management Logistics Planning & Management Services Sales & Service Transportation Operations Transportation Systems/Infrastructure Planning, Management & Regulation Warehousing & Distribution Center Operations
<p>Education & Training</p> <ul style="list-style-type: none"> Administration & Administrative Support Professional Support Services Teaching/Training 	<p>Information Technology</p> <ul style="list-style-type: none"> Information Support & Services Network Systems Programming & Software Development Web & Digital Communications 	
<p>Finance</p> <ul style="list-style-type: none"> Accounting Banking Services Business Finance Insurance Securities & Investments 	<p>Law, Public Safety, Corrections & Security</p> <ul style="list-style-type: none"> Correction Services Emergency & Fire Management Services Law Enforcement Services Legal Services Security & Protective Services 	

Health Science

NATIONAL CAREER CLUSTERS PATHWAYS:

- Health Informatics
- Diagnostic Services
- Support Services
- Biotechnology Research & Development

Regional Career Opportunities (Listed by Highest Projected Demand)

JOB ZONE 1	JOB ZONE 2	JOB ZONE 3	JOB ZONE 4	JOB ZONE 5
High School Diploma or Less*	High School Diploma*	Certificate or Associate's Degree**	Bachelor's Degree	Master's or Doctorate Degree
<p><i>Few regional occupations in these pathways require education at this degree level.</i></p> <p>Medical Equipment Preparers</p> <p>Annual Openings.....20 Median Wage.....\$29,071</p>	<p>Medical Secretaries</p> <p>Annual Openings.....205 Median Wage.....\$30,038</p>	<p>Veterinary Assistants & Laboratory Animal Caretakers</p> <p>Annual Openings.....155 Median Wage.....\$22,618</p>	<p>Medical & Clinical Laboratory Technologists</p> <p>Annual Openings.....55 Median Wage.....\$53,120**</p>	<p>Medical & Health Service Managers +</p> <p>Annual Openings.....150 Median Wage.....\$84,831</p>
<p>Orderlies</p> <p>Annual Openings.....20 Median Wage.....\$28,990**</p>	<p>Pharmacy Aides</p> <p>Annual Openings.....15 Median Wage.....\$24,933</p>	<p>Medical Records & Health Information Technicians +</p> <p>Annual Openings.....90 Median Wage.....\$42,630**</p>	<p>Biomedical Engineers</p> <p>Annual Openings.....5 Median Wage.....\$64,284*</p>	<p><i>Few regional occupations in these pathways require education at this degree level.</i></p>
<p><i>Few regional occupations in these pathways require education at this degree level.</i></p>	<p><i>Few regional occupations in these pathways require education at this degree level.</i></p>	<p>Medical and Clinical Laboratory Technicians</p> <p>Annual Openings.....80 Median Wage.....\$55,120**</p>	<p>Radiologic Technologists +</p> <p>Annual Openings.....45 Median Wage.....\$48,542</p>	<p><i>Consult with a career counselor or school advisor to explore additional high-demand occupations in these pathways that require a bachelor's degree.</i></p>

* For job zones 1-3, apprenticeship or on-the-job training may also satisfy employment requirements. ** State data was used due to limitations in regional data. *** National data was used due to limitations in regional and state data.

Source: TSBA District Data Dashboard | NS4ed™ Pathway2Careers™ 2018 Trademark NS4ed, LLC
[Explore careers at tsbadatadashboard.com](https://tsbadatadashboard.com) | | | | |

Health Science

NATIONAL CAREER CLUSTERS PATHWAYS:

- Health Informatics
- Diagnostic Services
- Support Services
- Biotechnology Research & Development

Regional High School Requirements and Programs (Grades 9-12)

English Language Arts	Math	Science	Social Studies	Foreign Language	Physical Education	Fine Arts	Elective Focus
English I	Algebra I	Biology	World History and Geography	Foreign Language I	Lifetime Wellness	Fine Arts Selection	Minimum of Three Courses See career programs and electives below.
English II	Geometry	Chemistry	U.S. History	Foreign Language II	Physical Education (.5)	-----	
English III	Algebra II	Physics	Economics / Government	-----	-----	-----	
English IV	Higher Level Math	-----	Personal Finance (.5)	-----	-----	-----	

Career Programs	Career Program Courses and Related Courses	Additional Electives	Regional Postsecondary Schools
<ul style="list-style-type: none"> Diagnostic Services See other Health Science pathways for additional career programs and opportunities. *Note: Programs and courses may vary by high school. 	<ul style="list-style-type: none"> Career Exploration Health Science Education Anatomy and Physiology Medical Therapeutics Diagnostic Medicine Rehab Careers 	<ul style="list-style-type: none"> Exercise Science Emergency Medical Services Nursing Education I & II Practicum or Internship 	<p>Math</p> <p>Other</p> <p>Science</p>
			<p>Certificates and Associate's Degrees</p> <ul style="list-style-type: none"> Pellissippi State Community College Tennessee College of Applied Technology Roane State Community College <p>Bachelor's and Advanced Degrees</p> <ul style="list-style-type: none"> Maryville College University of Tennessee Lincoln Memorial University

Postsecondary Programs/Majors for Occupations in this Pathway

Certificate or AA	Administrative Professional - Medical Office	Health Information Management	Radiologic Technology	Imaging Sciences	Medical Insurance Coding
Bachelor's Degree	Medical Laboratory Science	Biological Sciences	---	---	---
Advanced Degree	Medical Sciences	Radiology	Biomedical Engineering	Epidemiology	---

*** Limited program offerings at regional postsecondary schools.
 NS4ed™ Pathway2Careers™ 2018 Trademark NS4ed, LLC | | | |

Career Clusters & Pathways

In our economy, there are 1000+ occupations and numerous ways of grouping them. The National Career Clusters Framework groups occupations into **sixteen different career clusters** based on similarities in foundational knowledge and skills.



Agriculture, Food & Natural Resources

- Agribusiness Systems
- Animal Systems
- Environmental Service Systems
- Food Products & Processing Systems
- Natural Resources Systems
- Plant Systems
- Power, Structural & Technical Systems



Government & Public Administration

- Foreign Service
- Governance
- National Security
- Planning
- Public Management & Administration
- Regulation
- Revenue & Taxation



Manufacturing

- Health, Safety & Environmental Assurance
- Logistics & Inventory Control
- Maintenance, Installation & Repair
- Manufacturing Production Process Development
- Production
- Quality Assurance



Architecture & Construction

- Construction
- Design/Pre-Construction
- Maintenance/Operations



Health Science

- Biotechnology Research & Development
- Diagnostic Services
- Health Informatics
- Support Services
- Therapeutic Services



Marketing

- Marketing Communications
- Marketing Management
- Marketing Research
- Merchandising
- Professional Sales



Arts, A/V Technology & Communication

- A/V Technology & Film
- Journalism & Broadcasting
- Performing Arts
- Printing Technology
- Telecommunications
- Visual Arts



Hospitality & Tourism

- Lodging
- Recreation, Amusements & Attractions
- Restaurants & Food/Beverage Services
- Travel & Tourism



Science, Technology, Engineering & Mathematics

- Engineering & Technology
- Science & Mathematics



Business, Management & Administration

- Administrative Support
- Business Information Management
- General Management
- Human Resources Management
- Operations Management



Human Services

- Consumer Services
- Counseling & Mental Health Services
- Early Childhood Development & Services
- Family & Community Services
- Personal Care Services



Transportation, Distribution & Logistics

- Facility & Mobile Equipment Maintenance
- Health, Safety & Environmental Management
- Logistics Planning & Management Services
- Sales & Service
- Transportation Operations
- Transportation Systems/Infrastructure Planning, Management & Regulation
- Warehousing & Distribution Center Operations



Education & Training

- Administration & Administrative Support
- Professional Support Services
- Teaching/Training



Information Technology

- Information Support & Services
- Network Systems
- Programming & Software Development
- Web & Digital Communications



Finance

- Accounting
- Banking Services
- Business Finance
- Insurance
- Securities & Investments



Law, Public Safety, Corrections & Security

- Correction Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Legal Services
- Security & Protective Services



Return





Health Science



NATIONAL CAREER CLUSTERS PATHWAYS:

- Health Informatics
- Diagnostic Services
- Support Services
- Biotechnology Research & Development

Regional Career Opportunities (Listed by Highest Projected Demand)

JOB ZONE 1 High School Diploma or Less*	JOB ZONE 2 High School Diploma*	JOB ZONE 3 Certificate or Associate's Degree*	JOB ZONE 4 Bachelor's Degree	JOB ZONE 5 Master's or Doctorate Degree
<i>Few regional occupations in these pathways require education at this degree level.</i>	Medical Equipment Preparers Annual Openings 20 Median Wage \$29,071	Medical Secretaries Annual Openings 205 Median Wage \$30,038	<i>Bachelor's degrees in this pathway are often required for entry into graduate programs.</i>	Medical & Health Service Managers ★ Annual Openings 150 Median Wage \$84,831
	Orderlies Annual Openings 20 Median Wage \$28,980**	Veterinary Assistants & Laboratory Animal Caretakers Annual Openings 155 Median Wage \$22,618	Medical & Clinical Laboratory Technologists ★ Annual Openings 55 Median Wage \$53,120**	<i>Few regional occupations in these pathways require education at this degree level.</i>
	Pharmacy Aides Annual Openings 15 Median Wage \$24,933	Medical Records & Health Information Technicians ★ Annual Openings 90 Median Wage \$42,630**	Biomedical Engineers Annual Openings 5 Median Wage \$64,284*	

Return



Health Science



NATIONAL CAREER CLUSTERS PATHWAYS:

- Health Informatics
- Diagnostic Services
- Support Services
- Biotechnology Research & Development

Regional High School Requirements and Programs (Grades 9-12)

English Language Arts	Math	Science	Social Studies	Foreign Language	Physical Education	Fine Arts	Elective Focus
English I	Algebra I	Biology	World History and Geography	Foreign Language I	Lifetime Wellness	Fine Arts Selection	Minimum of Three Courses See career programs and electives below.
English II	Geometry	Chemistry	U.S. History	Foreign Language II	Physical Education (.5)	-----	
English III	Algebra II	Physics	Economics / Government	-----	-----	-----	
English IV	Higher Level Math	-----	Personal Finance (.5)	-----	-----	-----	

Career Programs	Career Program Courses and Related Courses	Additional Electives	Regional Postsecondary Schools				
<input type="checkbox"/> Diagnostic Services See other Health Science pathways for additional career programs and opportunities. *Note: Programs and courses may vary by high school.	<input type="checkbox"/> Career Exploration <input type="checkbox"/> Exercise Science <input type="checkbox"/> Health Science Education <input type="checkbox"/> Emergency Medical Services <input type="checkbox"/> Anatomy and Physiology <input type="checkbox"/> Nursing Education I & II <input type="checkbox"/> Medical Therapeutics <input type="checkbox"/> Nursing Services <input type="checkbox"/> Diagnostic Medicine <input type="checkbox"/> Practicum or Internship <input type="checkbox"/> Rehab Careers	Math Other <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ Science <input type="checkbox"/> _____ <input type="checkbox"/> _____	<table border="1"> <thead> <tr> <th>Certificates and Associate's Degrees</th> <th>Bachelor's and Advanced Degrees</th> </tr> </thead> <tbody> <tr> <td> <input checked="" type="checkbox"/> Pellissippi State Community College <input checked="" type="checkbox"/> Tennessee College of Applied Technology <input checked="" type="checkbox"/> Roane State Community College </td> <td> <input checked="" type="checkbox"/> Maryville College <input checked="" type="checkbox"/> University of Tennessee <input checked="" type="checkbox"/> Lincoln Memorial University </td> </tr> </tbody> </table>	Certificates and Associate's Degrees	Bachelor's and Advanced Degrees	<input checked="" type="checkbox"/> Pellissippi State Community College <input checked="" type="checkbox"/> Tennessee College of Applied Technology <input checked="" type="checkbox"/> Roane State Community College	<input checked="" type="checkbox"/> Maryville College <input checked="" type="checkbox"/> University of Tennessee <input checked="" type="checkbox"/> Lincoln Memorial University
Certificates and Associate's Degrees	Bachelor's and Advanced Degrees						
<input checked="" type="checkbox"/> Pellissippi State Community College <input checked="" type="checkbox"/> Tennessee College of Applied Technology <input checked="" type="checkbox"/> Roane State Community College	<input checked="" type="checkbox"/> Maryville College <input checked="" type="checkbox"/> University of Tennessee <input checked="" type="checkbox"/> Lincoln Memorial University						

Postsecondary Programs/Majors for Occupations in this Pathway

	Certificate or AA	Bachelor's Degree	Advanced Degree
Administrative Professional — Medical Office	Health Information Management	Radiologic Technology	Imaging Sciences
Medical Laboratory Science	Biological Sciences	***	***
Medical Sciences	Radiology	Biomedical Engineering	Epidemiology
			Medical Insurance Coding

*** Limited program offerings at regional postsecondary schools.
 NS4ed™ Pathway2Careers™ 2018. Trademark NS4ed, LLC.



Return



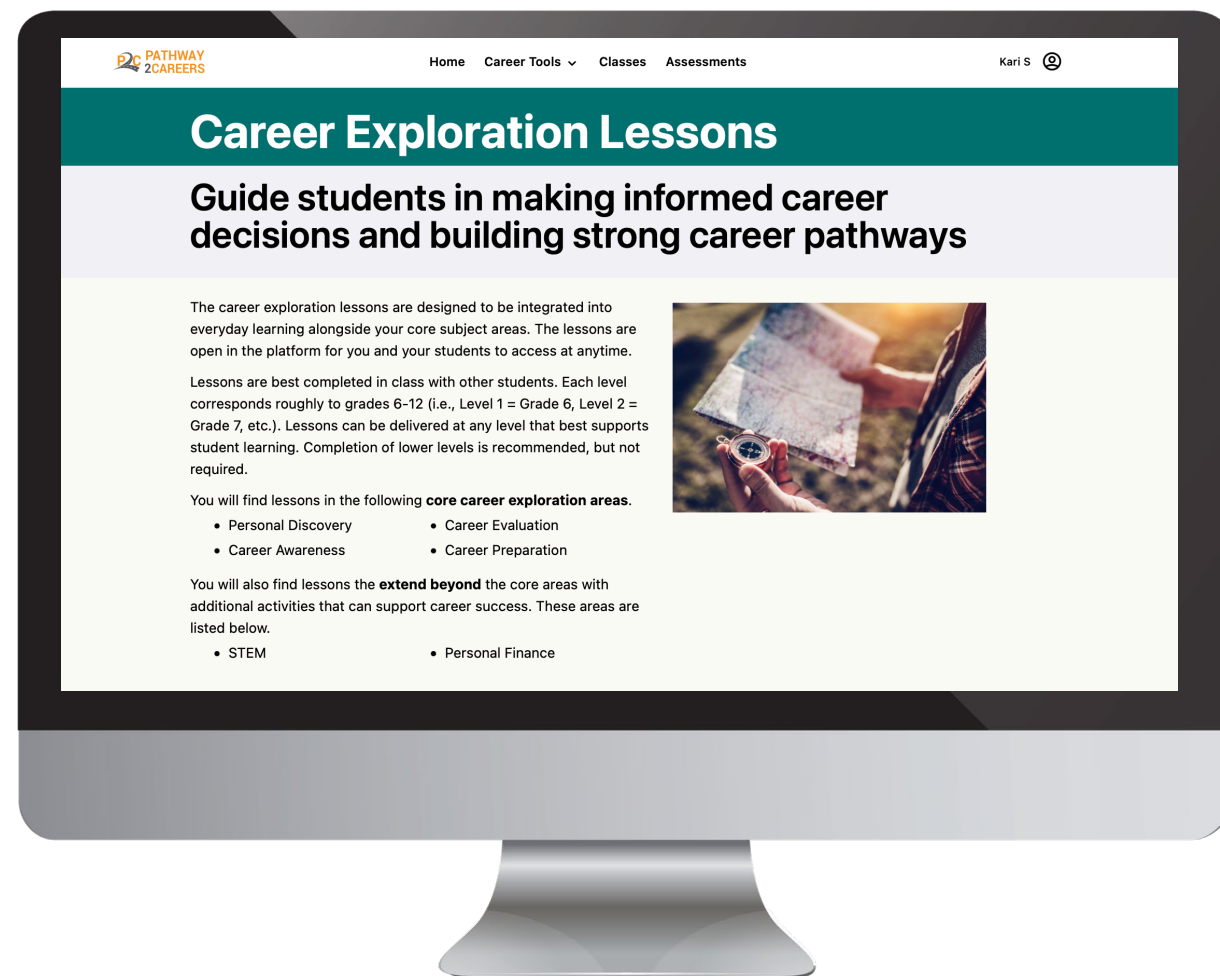
Connect Learning to Careers

Students can see...

- ✔ how math is applied in meaningful, everyday tasks.
 - ✔ the relationship between math proficiency and successful job performance.
 - ✔ the value in using math to reach job-related goals.
- ✔ Connecting math to careers can be a **powerful approach** to incorporate purpose into math learning.
 - ✔ Doing so will **improve students' attitudes** toward math and enhance motivation to acquire the critical math skills students will need for **employment success.**

Pathway2Careers Career Exploration

- Guided **career exploration** and pathway development system for grades 6-12



Sample Planning Worksheet

	Already Implemented	Implement This Year	Next Calendar Year	3-5 Year Plan
1. Conduct local needs assessment every two years	X			
2. Establish policies and align resources to high-value careers	X			
3. Provide professional development for labor market understanding	X			
4. Enhance career exploration with guided curriculum		X		
5. Infuse math curricula with career-connected learning			X	
6. Offer ongoing professional development for career-connected learning			X	

NEXT WEEK | Part 2

Career-Connected Learning Series

April 7 | Successfully launch & sustain career-connected learning

Thank you!

