Preparing students for success.

Highly engaging, hands-on, career-focused learning experiences
to guide students toward the next step in their learning journey.
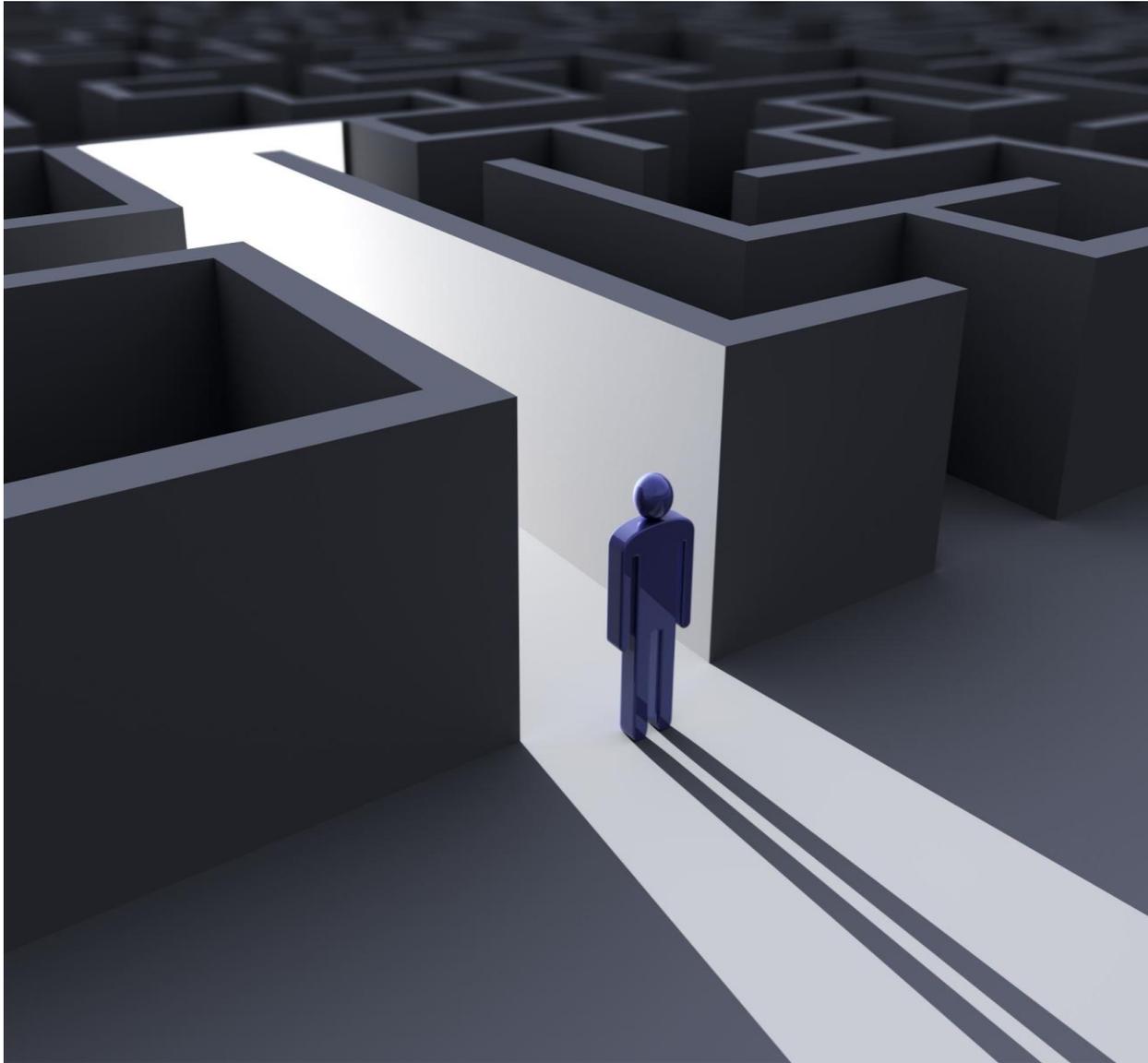
THE ACADEMIES OF LOUISVILLE

TOMORROW'S TALENT
4th Annual Workforce & Education

LOUISVILLE BUSINESS FIRST

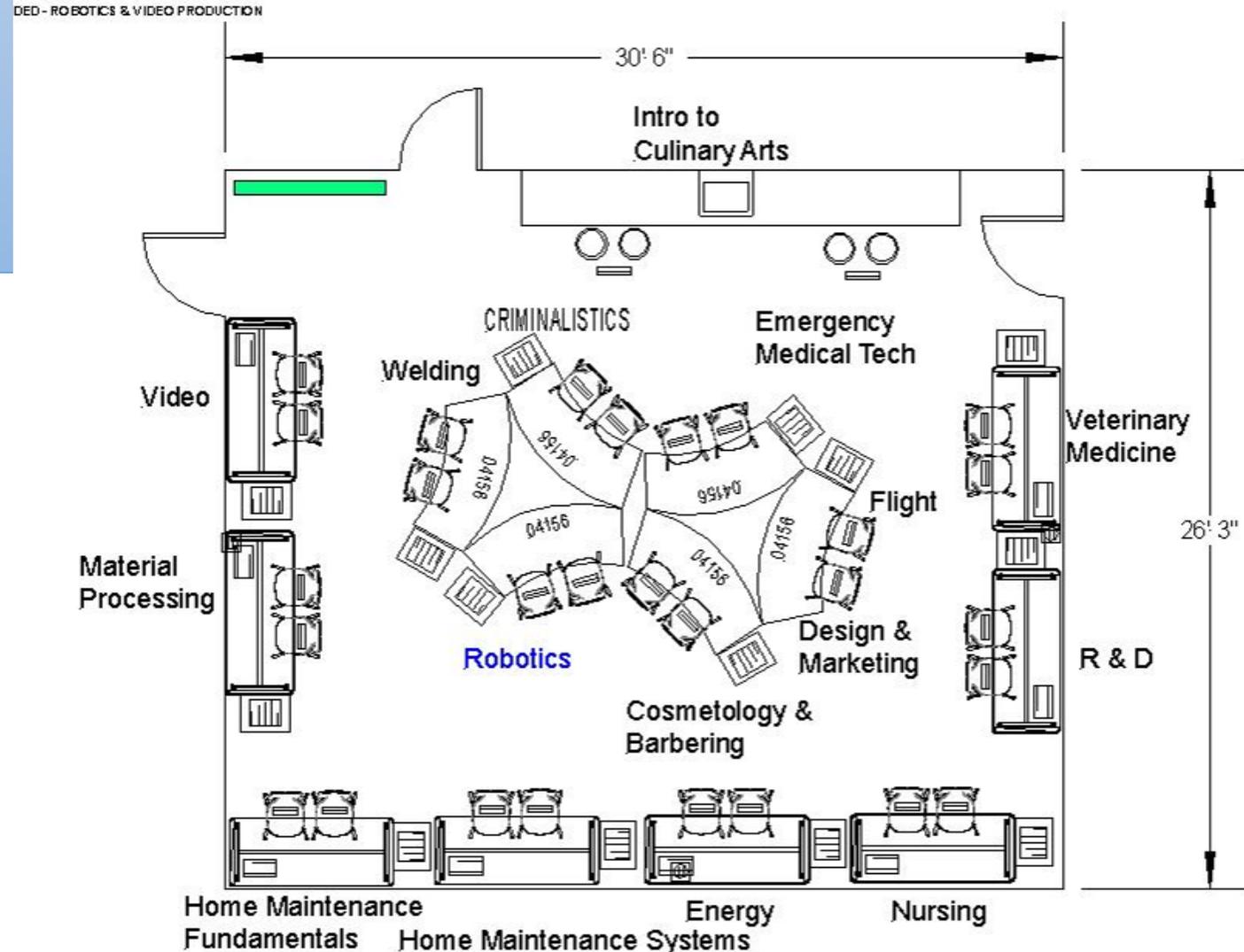People to know in education & workforce development

Paxton Patterson Mission:

We create highly engaging, hands-on, career focused learning experiences to guide students to the "next step" of their learning journey.

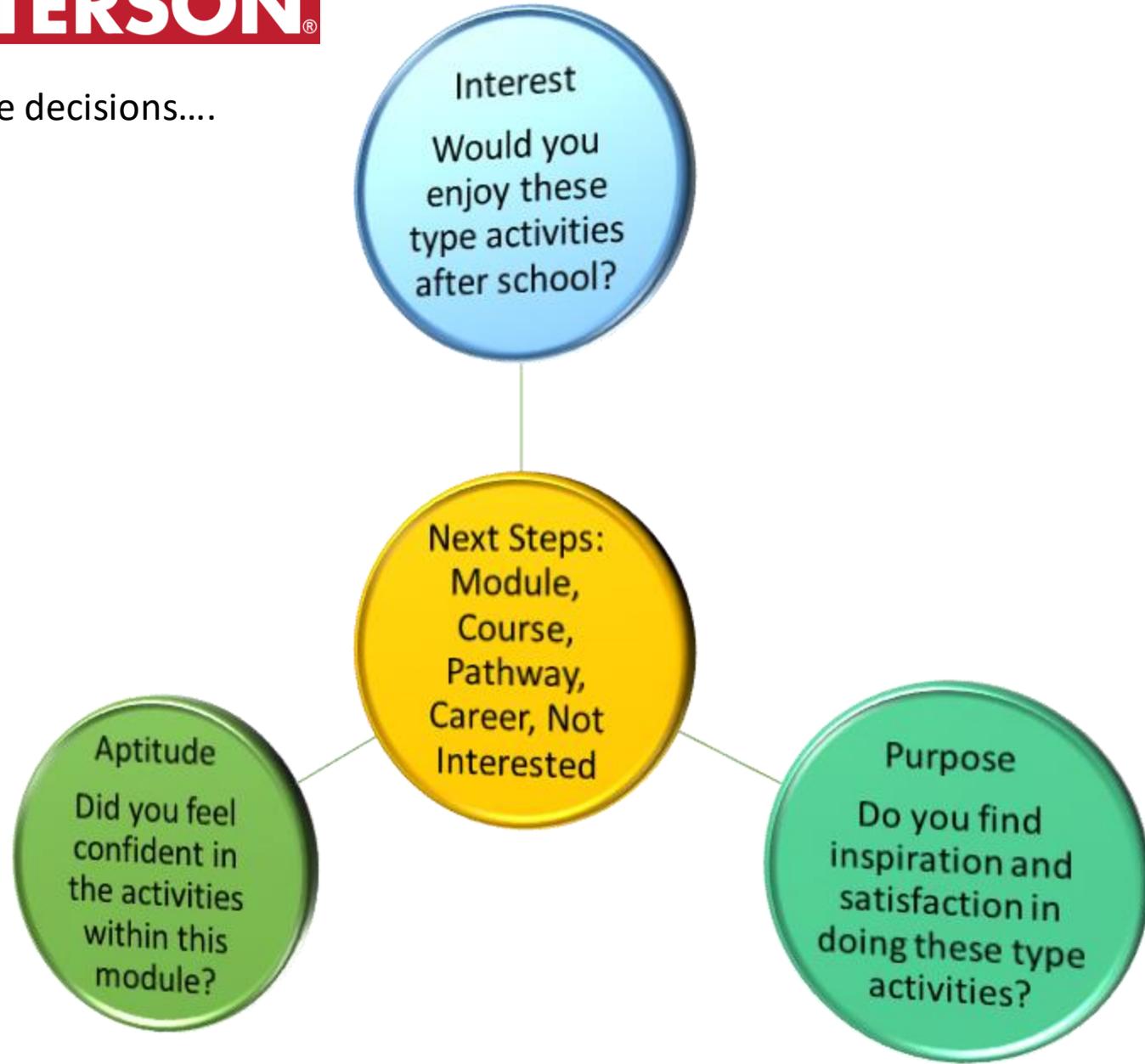**Paxton Patterson Vision:**

Every student takes the next step in their development through awareness, interest, and belief based on practical experiences.

Transform your classroom to transform student learning!

- Students work in teams of two.

- Each team is assigned a high-quality career exploration module.

- Teams access 10 days of authentic hands-on instruction.

- Cost Effective – all items are in use and active - rotational model of delivery.

- Teacher serves as the facilitator of learning.

COLLEGE & CAREER READY LABS

DED - ROBOTICS & VIDEO PRODUCTION

30' 6"

26' 3"

Intro to Culinary Arts

CRIMINALISTICS

Welding

Emergency Medical Tech

Video

Flight

Material Processing

Robotics

Design & Marketing

Cosmetology & Barbering

Veterinary Medicine

R & D

Home Maintenance Fundamentals

Home Maintenance Systems

Energy

Nursing

Young People / All People make decisions....

PAXTON / PATTERSON®

Interest
Would you enjoy these type activities after school?

Next Steps: Module, Course, Pathway, Career, Not Interested

Aptitude
Did you feel confident in the activities within this module?

Purpose
Do you find inspiration and satisfaction in doing these type activities?

National Career Clusters	HIGHSCHOOL PATHWAY	COLLEGE & CAREER READY LABS
Agriculture	Agribusiness Systems	Veterinary Medicine, Energy & Power (Small Engine)
	Animal Science Systems	Environment and Ecology
	Horticulture and Plant Science	
Business & Marketing Hospitality	Accounting, Admin. Support, E Commerce, Financial Services	Personal Finance, Employability
	Hospitality, Travel, Tourism, Culinary Arts	Hospitality & Tourism Management , Intro to Culinary Arts
	Management and Entrepreneurship, Marketing, Retail Services	Design and Marketing, Digital Audio Production
Health Science	Patient Care Tech	Introduction to Health Science Careers, Health Science 17+
	Allied Health	Sports Medicine
	EKG Technician	Nursing
	EMT	Biomedical Engineering
STEM	Network Administration	Robotics, Laser Technology
	Graphic Design	Computer Graphics and Game Design
	Computer Programming	Intro to Computer Science
	Robotics	Flight and Drone Technology
Education, Law, Public Safety	Teaching and Learning	Intro to Child Development
	Early Childhood Education	Lifetime Nutrition and Wellness Video Production
	Law Enforcement Services	Emergency and Fire Management Services, Criminalistics
Manufacturing, Engineering, Architecture and Construction	Masonry	Intro to Engineering and Design, CAD and Design
	Adv. Manufacturing/CNC Operator	Home Maintenance Systems, Materials Processing
	Carpentry	Home Maintenance Fundamental, Occupational Health Safety Const.
	Automation Engineering (mechanical)	Alternative Energy, Mechanisms, Building Skills 21+
	Aerospace Engineering / Aviation/ Aircraft Maintenance	Structural Engineering
	Welding Engineer/Welding	Digital Manufacturing, Pneumatics
	Automotive Engineering/Hybrid Automotive	Energy & Power
	Electrical Construction / Electricity /Electronics	Electricity & Electronics
		Research & Development

COLLEGE & CAREER READY LABS

Forensic Science
Activity Guide

Veterinary Medicine
Activity Guide

HealthScience Careers
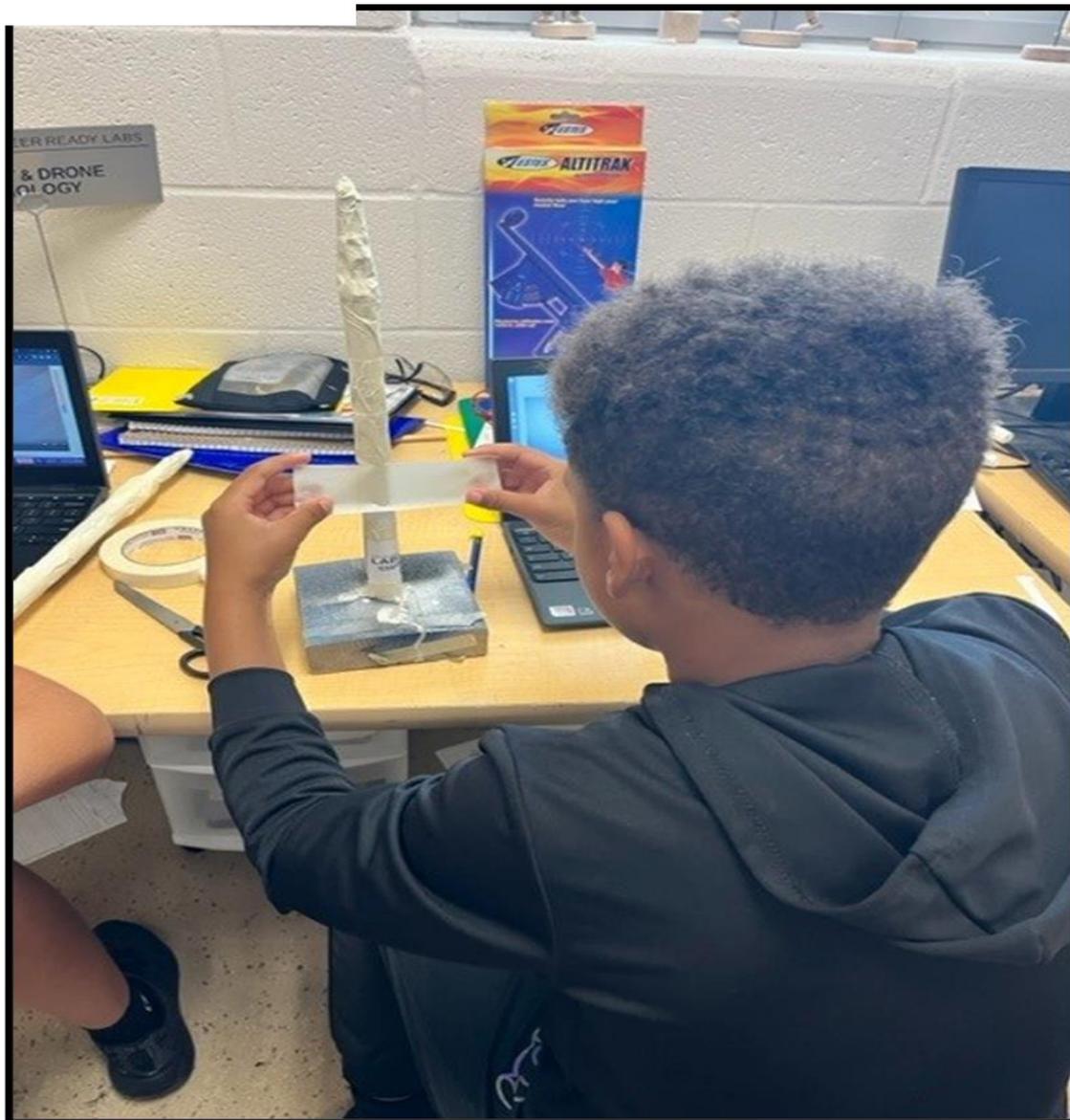
The missing link

There is a **GAP** in career focus throughout education

Unrelated,
Related Arts…

Art, Band, Choir, Library, Technology
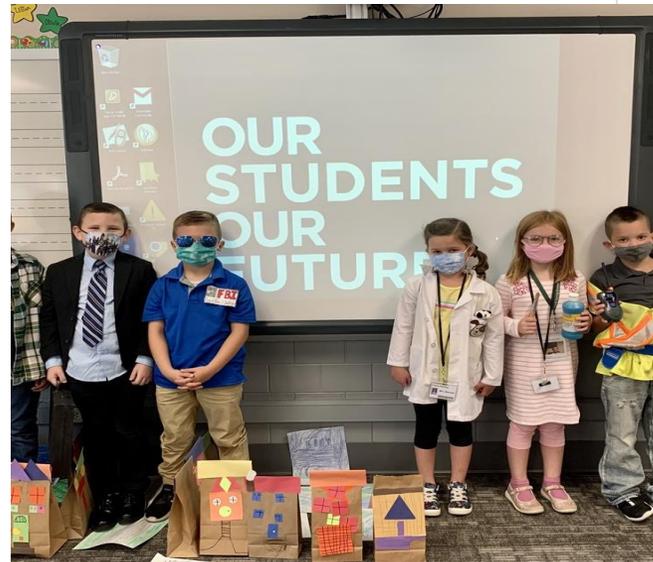

🌱	Agriculture, Food & Natural Resources
🏗️	Architecture & Construction
🎬	Arts, Audio/Video Technology & Communications
📊	Business Management & Administration
📚	Education & Training
💵	Finance
🏛️	Government & Public Administration
⚕️	Health Science
🍴	Hospitality & Tourism
👥	Human Services
⏻	Information Technology
⚖️	Law, Public Safety, Corrections & Security
⚙️	Manufacturing
📉	Marketing
⚛️	Science, Technology, Engineering & Mathematics
🚚	Transportation, Distribution & Logistics

Engagement Challenges

The **longer** students are enrolled in school, the less **engaged** they become

◆ % of students engaged in school

76%

44%

5TH GRADE   8TH GRADE   12TH GRADE

SOURCE- GALLUP POLL: https://news.gallup.com/opinion/gallup/170525/school-cliff-student-engagement-drops-school-year.aspx
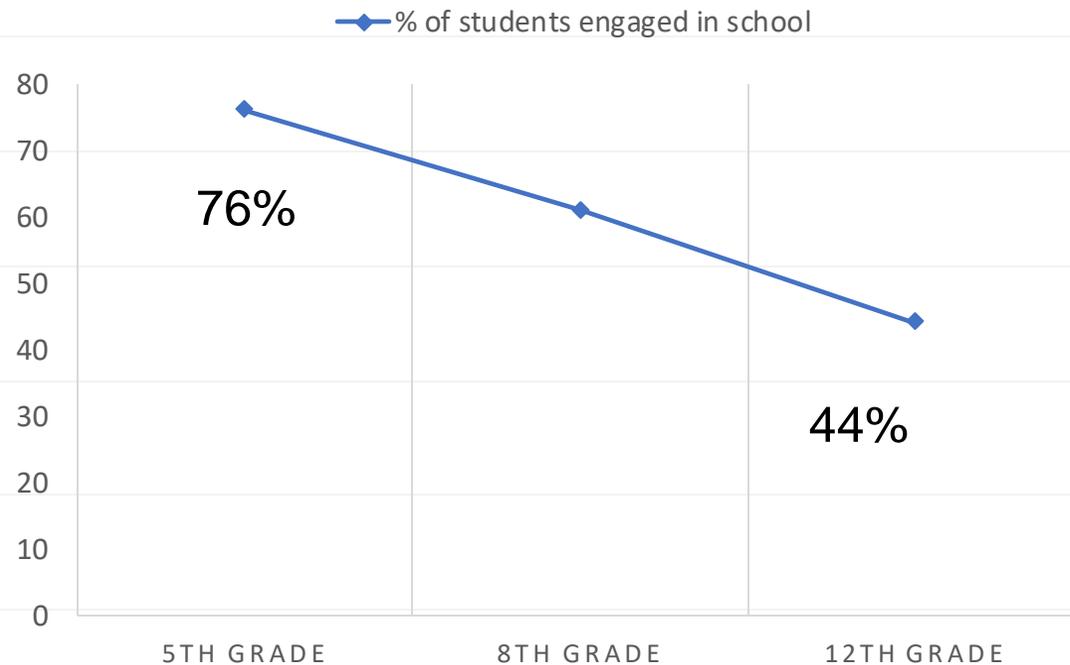
Passive Career Exploration Delivery

- **Online Career Exploration**
- **Resume Building**
- **Passive college and career**
- **Speakers about careers**
- **Videos**

"Research has identified **middle school** as a time when students can **benefit the most** from career exploration, a process of building self-awareness, learning about potential careers, and developing a plan for reaching future goals."

The right way:
Career exploration in middle school

Middle-grade students want to explore topics they find interesting and relevant, including careers, and they want to do so in active, ==hands-on== ways

National Education Association: Lorain, P. (N.d.). Brain Development in Young Adolescents: Good News for Middle School Teachers. Washington, DC.
Association for Middle Level Education: Caskey, M., & Ankara, Jr., V. A. (2014). Developmental Characteristics of Young Adolescents: Research Summary. Westerville, OH

EducationWeek®

Generational poverty is typically the result of a **lack of opportunity.**

Children who don't have access to high-quality education tend not to go on to college, and they wind up with low-paying hourly-wage jobs.

As adults, they don't have the time or resources to go back to school, and they raise their children in poverty.

Access to opportunities and entry into high-paying careers can break this cycle of poverty.

https://www.edweek.org/education/opinion-how-stem-education-can-help-end-poverty/2017/09

ADDRESSING ABSENTEEISM

STUDENT ENGAGEMENT & RELEVANCY

81% of student dropouts say relevant, real-world learning opportunities would have kept them in school

SOURCE: "The silent epidemic, perspectives of high school dropouts" bill & Melinda gates foundation
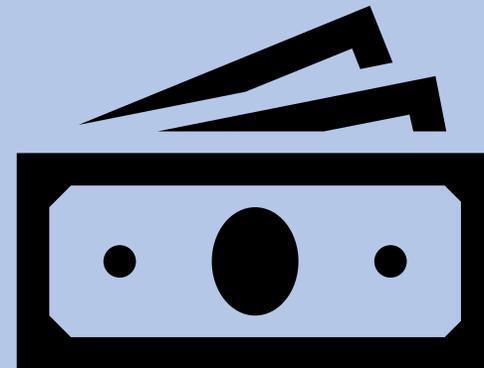https://docs.gatesfoundation.org/documents/the silentepidemic3-06final.pdf

College indecision & salary surprises
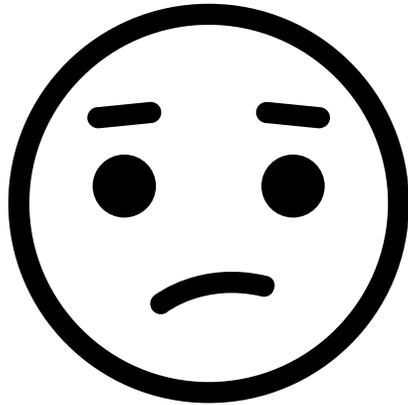
- 50% of students start college with an undecided major

- 75% change majors at least once

Nearly 30% of Americans with Associate Degrees now make MORE than those with Bachelors Degrees

"Undecided First-Year Students: A 25-Year Longitudinal Study", Virginia Gordon, George Steele and
"Community College Grads Out Earn Bachelors Degree Holders", Georgetown University's Center on Education and the Workforce
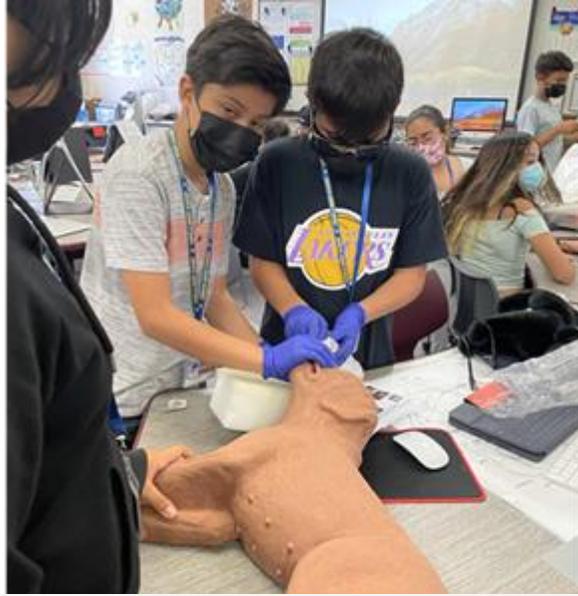
When The
WHY
Is Big Enough
The
HOW
Is Easy

Transform your classroom to transform student learning!

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- Rotational model of delivery.

- Teacher serves as the facilitator of learning.
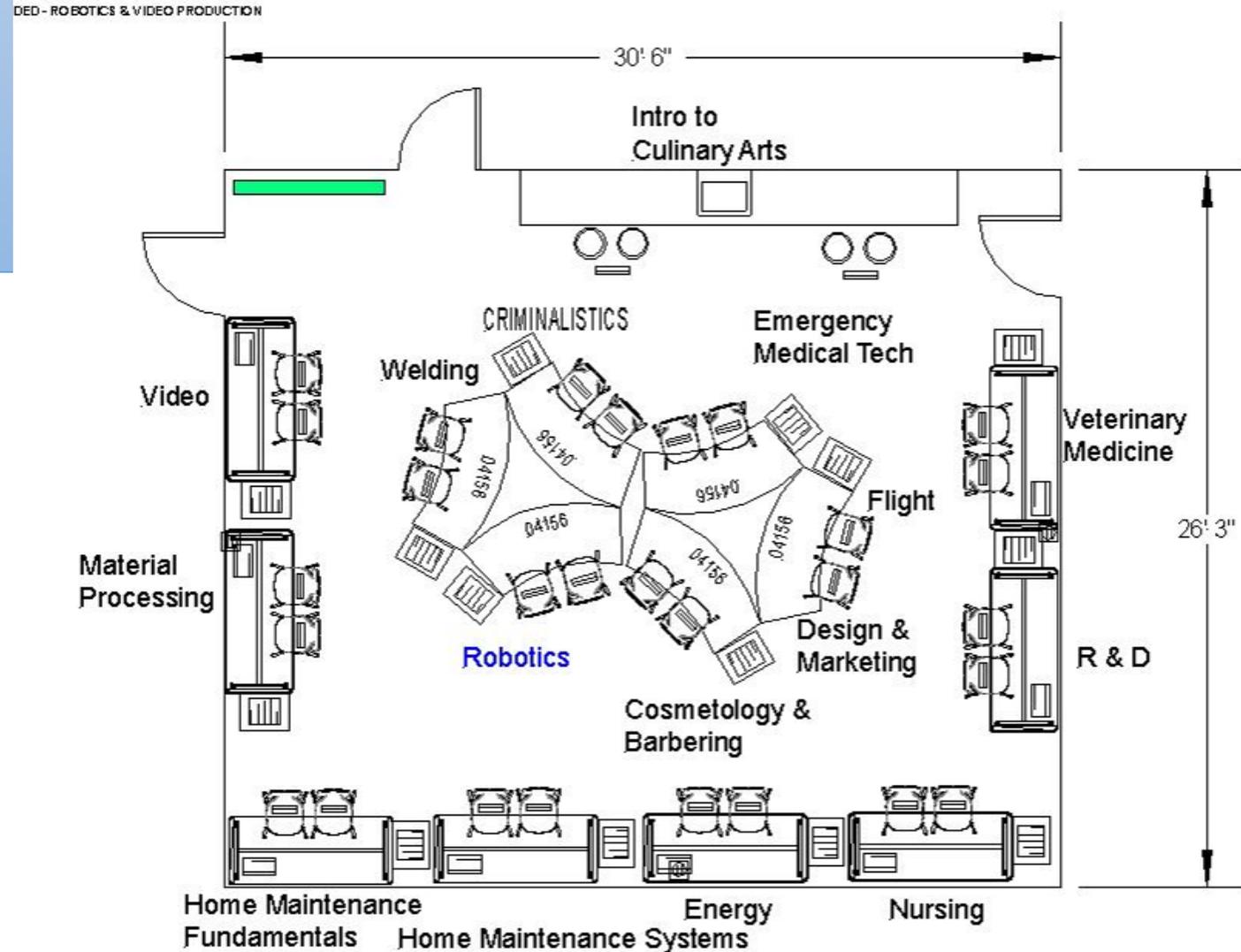
"MY CLASSROOM SETTING IS ANYTHING BUT TRADITIONAL. THE PAXTON/PATTERSON LABS CREATE AN ATMOSPHERE WHERE THE ROOM IS ALIVE WITH STUDENTS USING REAL TOOLS IN REAL-WORLD ACTIVITIES."
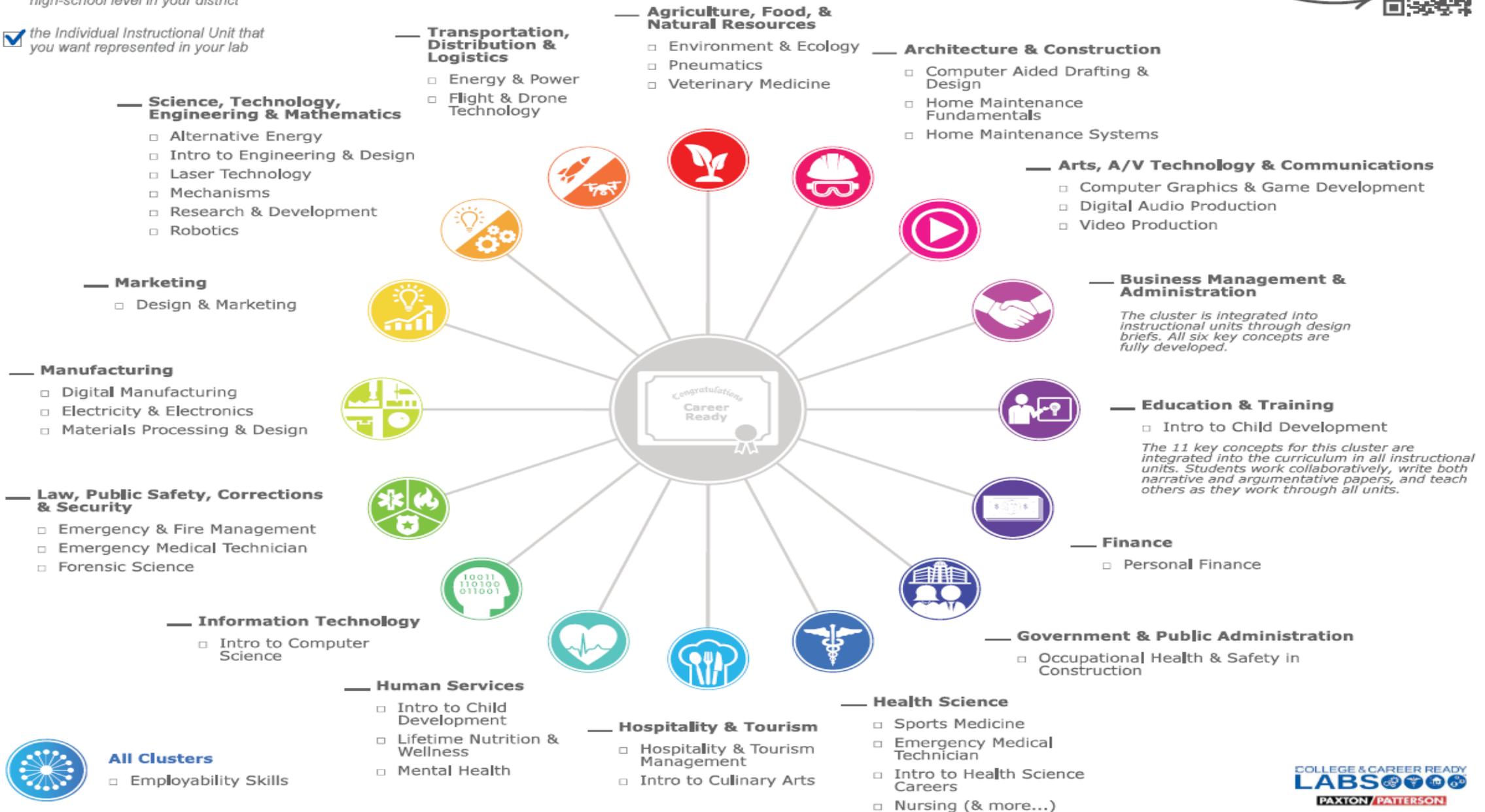
- **Laura Bischoff** | *College & Career Ready Labs - STEM Instructor* | Broad Creek Middle School

BUILD YOUR PERFECT LAB

☑ what clusters are offered at the high-school level in your district

☑ the Individual Instructional Unit that you want represented in your lab

Transportation, Distribution & Logistics
- Energy & Power
- Flight & Drone Technology

Agriculture, Food, & Natural Resources
- Environment & Ecology
- Pneumatics
- Veterinary Medicine

Architecture & Construction
- Computer Aided Drafting & Design
- Home Maintenance Fundamentals
- Home Maintenance Systems

Science, Technology, Engineering & Mathematics
- Alternative Energy
- Intro to Engineering & Design
- Laser Technology
- Mechanisms
- Research & Development
- Robotics

Arts, A/V Technology & Communications
- Computer Graphics & Game Development
- Digital Audio Production
- Video Production

Marketing
- Design & Marketing

Business Management & Administration

The cluster is integrated into instructional units through design briefs. All six key concepts are fully developed.

Manufacturing
- Digital Manufacturing
- Electricity & Electronics
- Materials Processing & Design

Education & Training
- Intro to Child Development

The 11 key concepts for this cluster are integrated into the curriculum in all instructional units. Students work collaboratively, write both narrative and argumentative papers, and teach others as they work through all units.

Law, Public Safety, Corrections & Security
- Emergency & Fire Management
- Emergency Medical Technician
- Forensic Science

Finance
- Personal Finance

Information Technology
- Intro to Computer Science

Government & Public Administration
- Occupational Health & Safety in Construction

Human Services
- Intro to Child Development
- Lifetime Nutrition & Wellness
- Mental Health

Hospitality & Tourism
- Hospitality & Tourism Management
- Intro to Culinary Arts

Health Science
- Sports Medicine
- Emergency Medical Technician
- Intro to Health Science Careers
- Nursing (& more...)

All Clusters
- Employability Skills

COLLEGE & CAREER READY
LABS
PAXTON / PATTERSON

CAREER DISCOVERY LABS LEVEL 1 • AWARENESS Recommended Grades 4-6	COLLEGE & CAREER READY LABS LEVEL 2 • EXPLORATION Recommended Grades 6-9		HEALTH SCIENCE CAREER LABS LEVEL 3 • EXPERIENCE Recommended Grades 9-12	CONSTRUCTION CAREER LABS LEVEL 3 • EXPERIENCE Recommended Grades 9-12
CDL Alternative Energy	Alternative Energy	Hospitality & Tourism Management	HSC Biomedical Engineering	Blueprint Reading Skills
CDL Computer Science	Biomedical Engineering	Intro to Child Development	HSC Biotechnology R&D	Communications Skills
CDL Design/Pre-Construction	Computer Aided Drafting & Design	Intro to Computer Science	HSC Clinical Lab Practices	Concrete Skills
CDL Electricity	Computer Graphics & Game Devel	Intro to Culinary Arts	HSC Dentistry	Drywall Skills
CDL Engineering	Cosmetology & Barbering	Intro to Engineering & Design	HSC Emergency Medical Technician	Electrical Skills
CDL Environment & Ecology	Criminalistics	Intro to Health Science Careers	HSC Environmental Health & Safety	Estimation Skills
CDL Flight Principles	Dentistry	Introduction to Welding Basics	HSC Health Information Management	Hand Tool Skills
CDL Forensic Science	Design & Marketing	Laser Technology	HSC Intro to Health Science Foundations	Occupational Health & Safety
CDL Health Science	Digital Audio Production	Lifetime Nutrition & Wellness	HSC Medical Imaging	Power Tool Skills
CDL Manufacturing Production	Digital Manufacturing	Materials Processing & Design	HSC Mental Health	Surveying & Site Planning
CDL Nutrition & Wellness	Electricity & Electronics	Mechanisms	HSC Nursing	Wall Framing Skills
CDL Robotics	Emergency & Fire Management Se	Mental Health	HSC Ophthalmology	Employability Skills
	Emergency Medical Technician	Nursing	HSC Pharmacology	Year Two - Construction Foundation
	Employability Skills	Occupational Health & Safety - Constr	HSC Speech Therapy	Cabinetmaking Skills
	Energy & Power	Ophthalmology	HSC Sports Medicine	Finish Carpentry Skills
	Engine/Stand/Mat Combination	Personal Finance	HSC Therapeutic Services	Green Construction Skills
	Environment & Ecology	Pneumatics	HSC Veterinary Medicine	HVAC
	Environmental Health & Safety	Research & Development		Masonry Skills
	Flight & Drone Technology	Robotics		Painting Skills
	Health Information Management	Speech Therapy		Plumbing Skills
	Home Maintenance Fundamentals	Sports Medicine		Roof Framing Skills
	Home Maintenance Systems	Structural Engineering		Tile Setting Skills
		Veterinary Medicine		Weatherization
		Video Production		

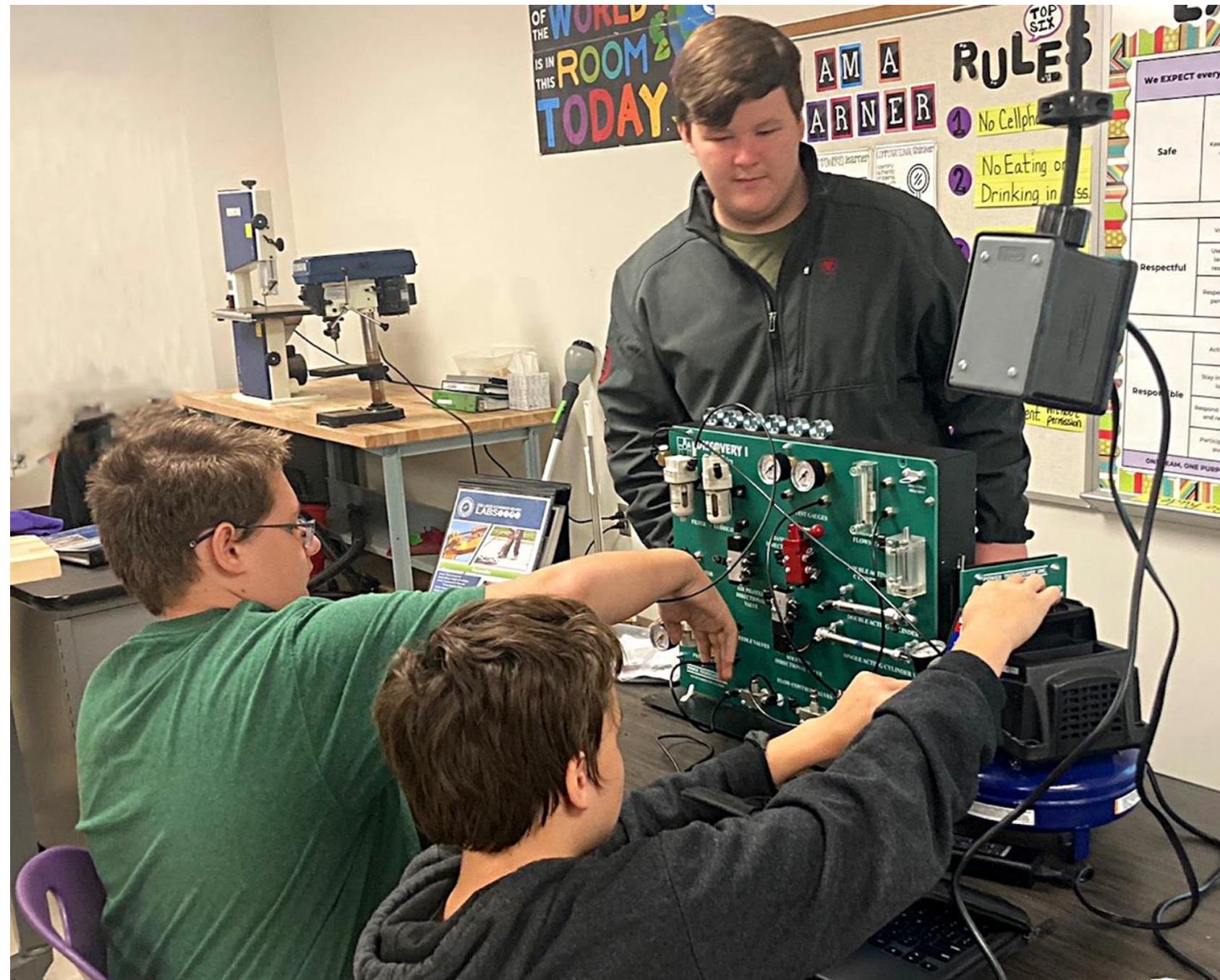Teacher Impact of a Paxton Patterson Lab…

Equip the teacher with the curriculum, supplies, and equipment to provide authentic, deeper learning experiences.

Deliver, Unpack, and Install your lab. and provide a ½-full day on-site lab orientation

Teach you to facilitate learning and provide career exploration opportunities for all industry sectors to all students.

2-3 days of hands-on/Minds-On Training.

Ongoing technical support M-F.

Determine their next steps based on experiences….
- *choose another module*
- *choose a course or pathway*
- *Not interested*
- *choose a potential career*

Find a sense of belonging
- *(Attendance and Behavior)*

Experience Success at School
- *(Attendance, Behavior, Mental Health)*

Provide Access and Opportunities for all students
- *ECE, ESL, Gender, Poverty*

Increase "choosers" and decrease "defaulters"
- *Choosers are more engaged*

Computer Animation and Graphics
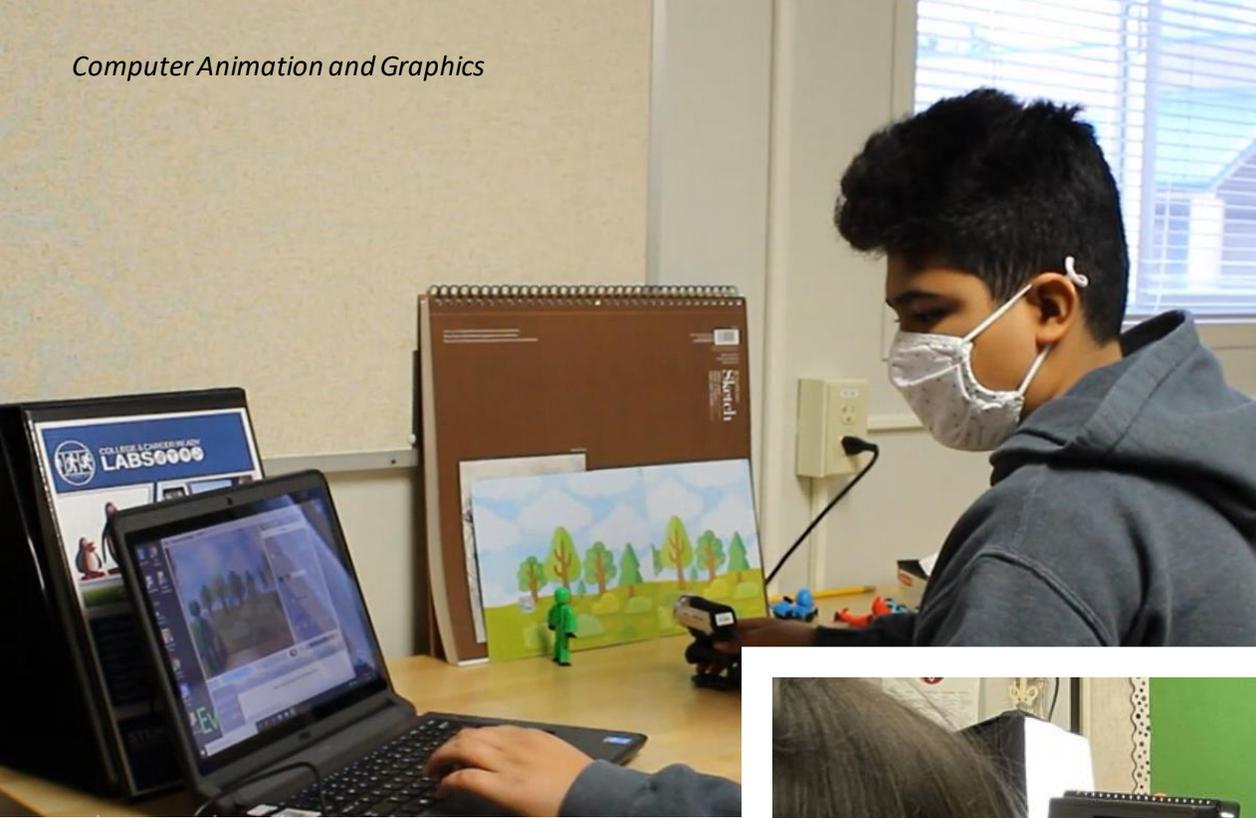
Video Production

Nursing

Home Maintenance Systems

Energy & Power

"STUDENTS FROM ALL BACKGROUNDS - LOW ACADEMIC STUDENTS, HIGH ACADEMIC STUDENTS, SPECIAL EDUCATION, ENGLISH LANGUAGE LEARNERS, EVEN NEWCOMERS WHO SPEAK NO ENGLISH AT ALL CAN FIND SUCCESS."

- **Todd Roth** | *Exploratory Technology Instructor* | Yorba Middle School

PATHWAYS START HERE

COLLEGE & CAREER READY LABS

PAXTON/PATTERSON

THE BEST COLLEGE & CAREER PREPARATION

Elementary School Programs • Middle School Programs • High School Programs

Career Discovery Labs

College & Career Ready Labs

Health Science Careers

BuildingSkills

Career Discovery Labs™

Elementary Career Labs provides the ultimate career exploration for primary school students by integrating everyday work with grade level math, science, reading, and critical thinking. These hands-on experiences align with career cluster skills and knowledge standards to help students discover their unique interests and talents. The setup is ideal for daily or weekly enrichment, after-school, and summer camps. Everything you need is included and organized for easy distribution and engagement.

- 12 Curriculum Areas
- 4 Hands-On Career Lessons in each area
- Career Ready Practices
- Compatible on All Devices
- Whole Class & Small Group Instruction
- Organized Storage System

CAREER DISCOVERY LABS

Pathways Start Here

ALTERNATIVE ENERGY
STEM

Chemical battery technology • wind turbines • photovoltaic processes • calculating output • fuel cell cars

FLIGHT PRINCIPLES
STEM, Transportation

Basic rocketry • principles of flight • flight systems • aerodynamics • rotary aircraft & autorotation

COMPUTER SCIENCE
Information Technology

Binary numbers • app design • logic statements & truth tables • basic programming • computational thinking

FORENSIC SCIENCE
Law & Public Safety, STEM

Investigating crimes • ink chromatography • handwriting analysis • fingerprints • impression evidence

DESIGN\PRE-CONSTRUCTION
Architecture & Construction

Using an architect's scale • technical drawings • orthographic drawings • scale drawings

HEALTH SCIENCE
Health Science

Preventing disease transmission • biotech R & D • pipetting • diagnostics • therapeutics & adaptive equipment

ELECTRICITY
STEM

Conductivity • circuits • switches • resistance & continuity • circuit protection & fuses • electromagnetism

MANUFACTURING - PRODUCTION
Manufacturing

Mass production • quality control • using a caliper • the design process • prototyping • product design

ENGINEERING
STEM

Beam construction & testing • cantilevers • geodesic domes • the design process • tower challenge

NUTRITION & WELLNESS
Human Services, Hospitality & Tourism

Nutrition labels • creating healthy snacks • food safety • fat & sugar demonstration • calculating heart rate zones

ENVIRONMENT & ECOLOGY
Agriculture, STEM

pH testing • water filtration • soil testing • sustainable packaging • composition of soil

ROBOTICS
STEM

Building recycled robots • VEX GO robot • basic programming • design & innovation challenges

HANDS-ON / MINDS-ON

paxtonpatterson.com

877-243-8763

Day	Activity Name and Description	Cluster Standard	TX CDS	Career Ready Practice(s)
	Alternative Energy			
1	**Hydrogen Fuel Cell Car** Compare and contrast fuel cell technology as an alternative to fossil fuels	ST-ET-3		CRP 1 CRP 2
2	**Solar Energy** Compare and contrast solar energy as an alternative to fossil fuels	ST-ET-3		CRP 1 CRP 2
3	**Wind Energy** Compare and contrast wind energy as an alternative to fossil fuels	ST-ET-3		CRP 1 CRP 2
4	**Direct Current** Perform experiments using stored battery energy consistent with alternative energy applications	ST-ET-3		CRP 1 CRP 2
	Computer Science			
1	**Working With Binary Numbers** Encode letters using the binary number system	IT-WD-4 ST-SM-1 ST-SM-4		CRP 2 CRP 11
2	**Using Truth Tables** Fill in missing truth table information and demonstrate using truth tables while playing a game based on logic	IT-PRG-4 ST-SM-1 ST-SM-4		CRP 2 CRP 4 CRP 8 CRP 11
3	**Basic Programming** Practice writing basic programming instructions	IT-PRG-2 IT-PRG-4 IT-PRG-5 IT-PRG-7		CRP 2 CRP 4
4	**Paper Prototype App Design** Demonstrate the user flow through an app's design using a paper prototype	IT-WD-2 IT-WD-4 IT-WD-5		CRP 2 CRP 6

COLLEGE & CAREER READY LABS®

LEVEL 2 • EXPLORATION

Recommended Grades 6-9

Ultimate College and Career Exploration
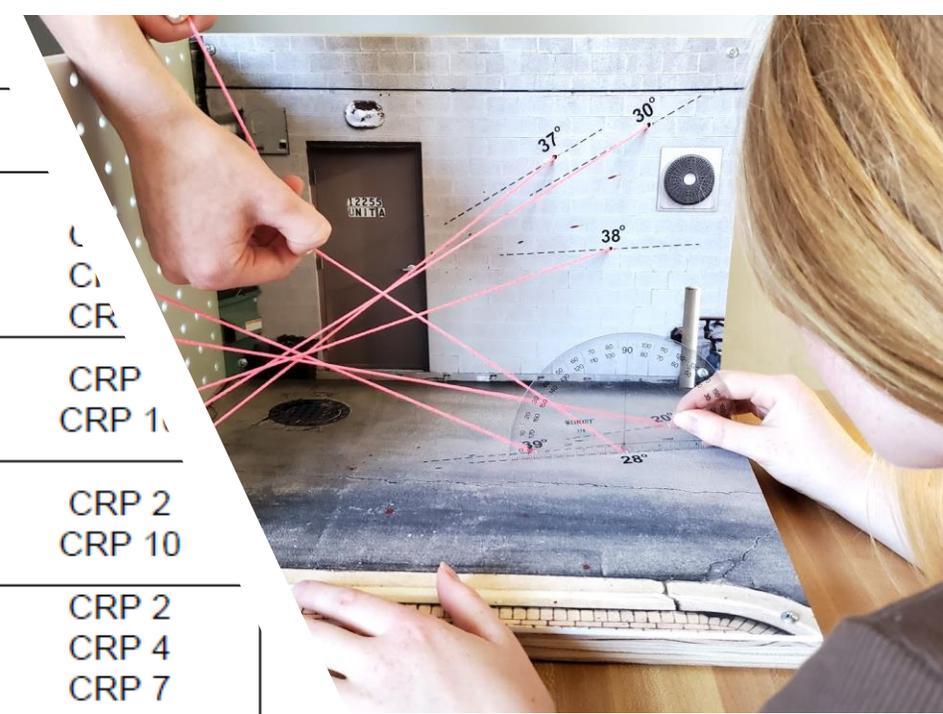
Authentic Learning Experience

Authentic Tools and Equipment

- Flexible 10-Day Schedule
- Hands-on Projects
- Available on Any Device, Any Time
- Two-Person Teams
- Career Exploration
- Design Briefs

Home Maintenance Fundamentals

Day	Activity Name and Description	Standards	
1	★**Learning to Use the Proscope** Gain an understanding of digital microscope and software	ST-S	
2	★**Investigating Fibers** Solve a crime by comparing different fibers to evidence fibers	ST-SM	
3	**Using Ink Chromatography** Solve a crime by comparing student created samples to evidence samples	ST-SM-1	
4	★ (Part 2) **Internet Research - FBI Fingerprinting and Investigating Fingerprints** Explore the FBI website; Learn about fingerprint patterns and create an official fingerprint identification card	ST-SM-2 ST-SM-3	
5	**Narrative Writing / Checkpoint Test** Critical writing explaining what a Proscope is and how it works and Checkpoint Test	ST-SM-3	2
6	**Finding Evidence in the Soil** Solve a mystery by finding evidence in soil samples	ST-SM-1	2
7	**Latent Fingerprints** Lift fingerprints from a crime scene	ST-SM-1	2
8	★**Design Brief** Utilize previously learned information to create a composite image and explain the benefits of utilizing software to solve crimes	ST-SM-2 ST-SM-3	3
9	**(Bonus) Internet Research - Composite Drawing** Explore website of a forensic artist; Explain the steps used to develop a composite drawing	ST-5 ST-SM-2	2
	(Bonus) Internet Research - Crime Scene Investigator Website explains the profession of a Crime Scene Investigator (CSI)	ST-5	1
10	**Argumentative Writing / Checkpoint Test** Critical writing explaining how the use of certain forensic technologies have led to using evidence to solve a crime and	ST-SM-1	3

Career Exploration

MY NEXT MOVE

Through our Learning Systems students learn the importance of:

- Career Clusters & Pathways
- Interest, Aptitude & Self-Discovery
- Self-Evaluation & Career Selection
- Career Research & Exploration

At the end of each module, students utilize the Career Exploration website *My Next Move* to research two careers of interest they learned about during the module.

Students research the following:

- Job Description
- Education Requirements
- Local Training & Opportunities
- Job Outlook & Salary

Assessment

Evidence & Feedback

Formative Assessment and Mastery Learning

- Practice Questions & Knowledge Checks
- Feedback System & Mastery
- Checkpoint Tests
- Critical Writing Assessments
- Rubrics

Each day, students are asked to submit **Evidence of Learning** after completing activities. The instructor can Accept or Reject their Evidence.

Example:

Step 3: **Submit your Evidence**
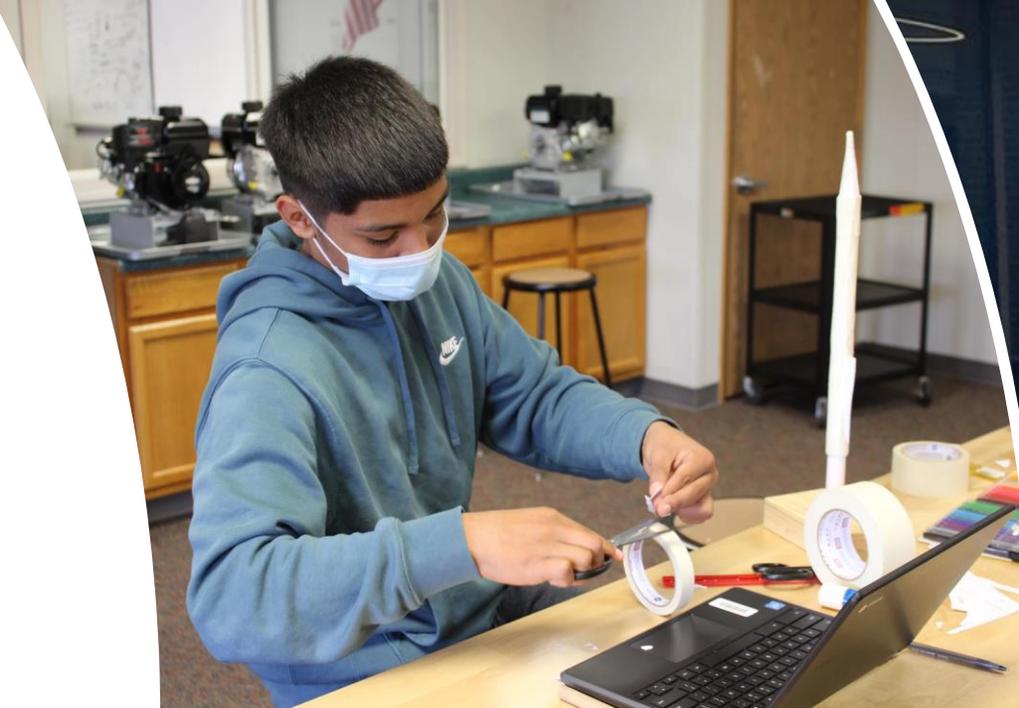
Submit a photo of your Scrambled Eggs.

SUBMIT FILE

Describe the changes you would make or ways to improve this lab if you were given the chance to do it over again?

SUBMIT

First Day of Class
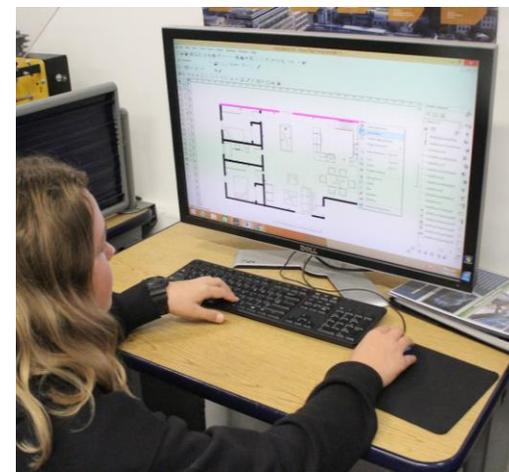
Flight & Drone Technology

- Build a Rocket

- Test a Rocket
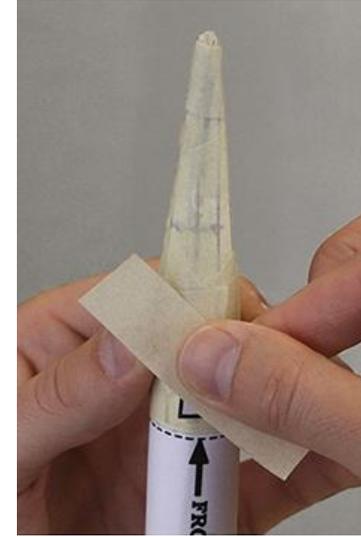
- Launch a Rocket

- Basic Drone Operation

Ask three before me...

1. Partner collaboration

2. Video Support

3. Google Text to Speech (languages)

4. Read Instructions on screen and in binder.

NOSE CONE & BODY TUBE PART II
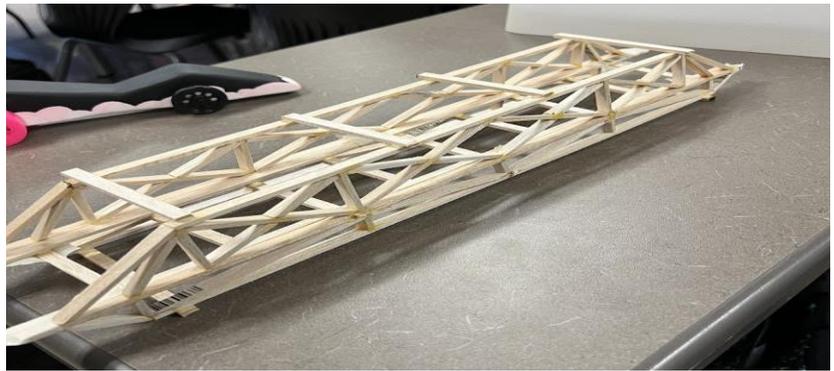
Structural Engineering

- **Handheld cutting tools.**

- **Build beams**

- **Design trusses**

- **Test beams and trusses**

Structural Engineering

- **Digital Audio Production**
  - **Creating Beats**
  - **Mixing/Balancing**
  - **Multiple Tracks**
  - **Basic & Advanced Editing**
  - **Audio Quality**
- **Audio in Podcasts & Production Values**

Hospitality & Tourism

- **Prepare a table for two**
- **Travel booking**
- **Conference room layouts**
- **Meeting & event planning**

Alternative Energy

- Create Electricity from Wind by Building a Turbine
- Hydrogen Fuel Cell Car
- Solar Panel Experiments
- Sources of Clean Energy
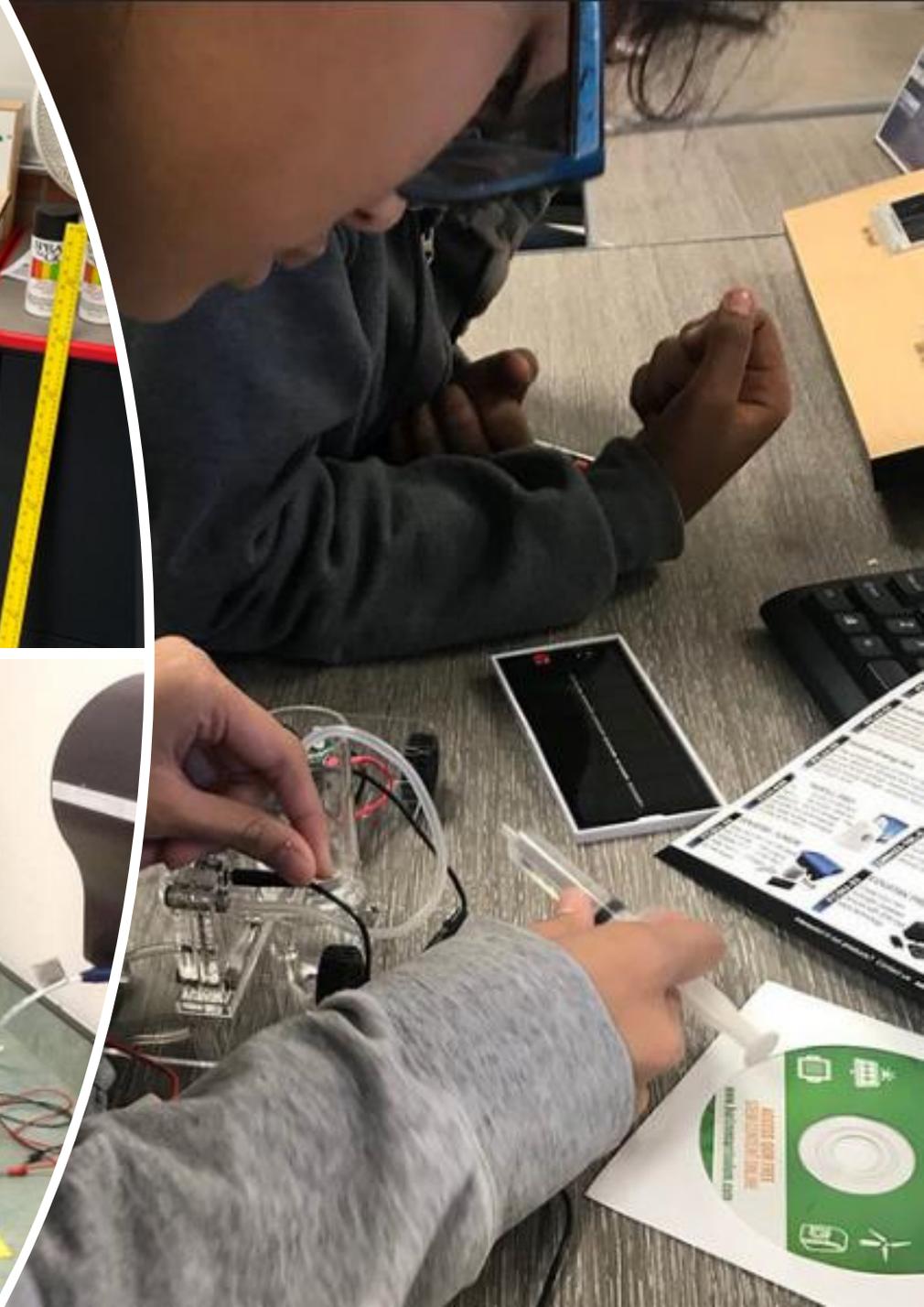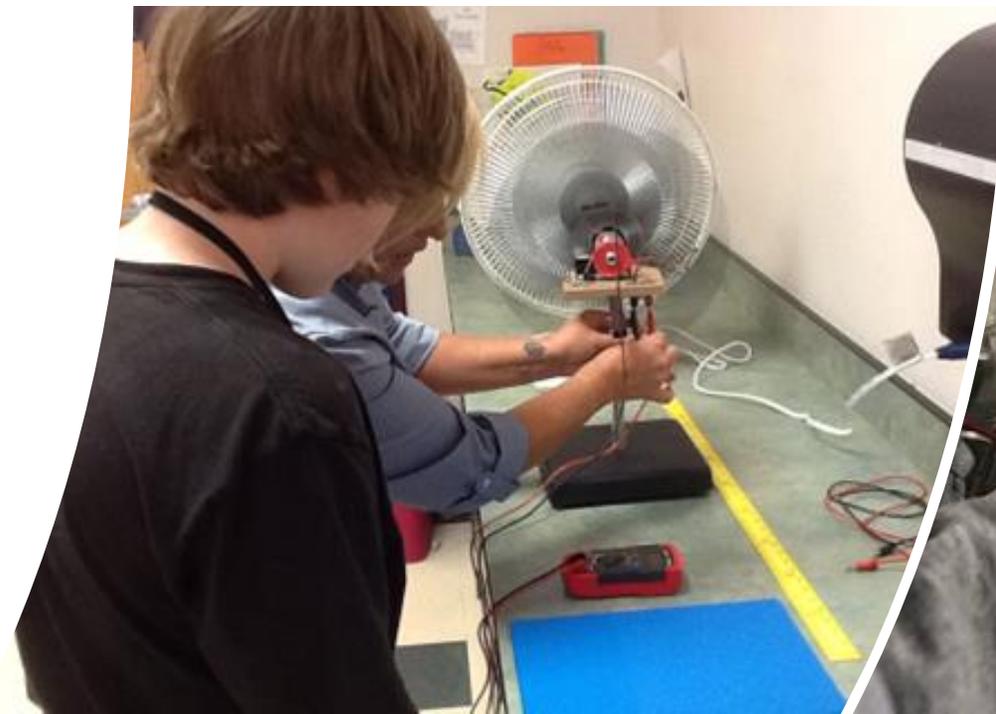
Energy & power (small engines)

- 4-stroke Engine Disassembly & Reassembly
- Testing & Internal Engine Components
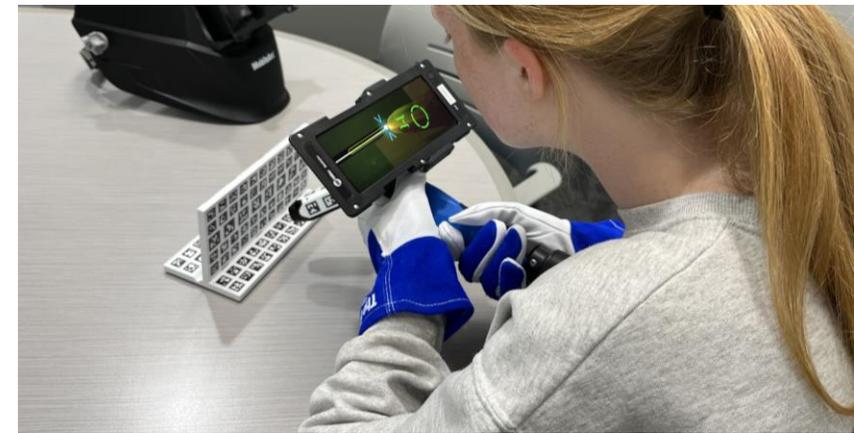- Crankcase & Valves

Cosmetology & Barbering

Biomedical Engineering

Introduction to Culinary Arts

Home Maintenance Fundamentals
- Hand Tools
- Construction Terms
- Bathroom Faucet Maintenance
- Electrical Wiring Basics
- Installing a Light Fixture & Switch

Sports Medicine

- Common sports-related injuries
- Taping/wrapping ankles/feet
- Knee rehabilitation
- Stabilizing a suspected neck injury
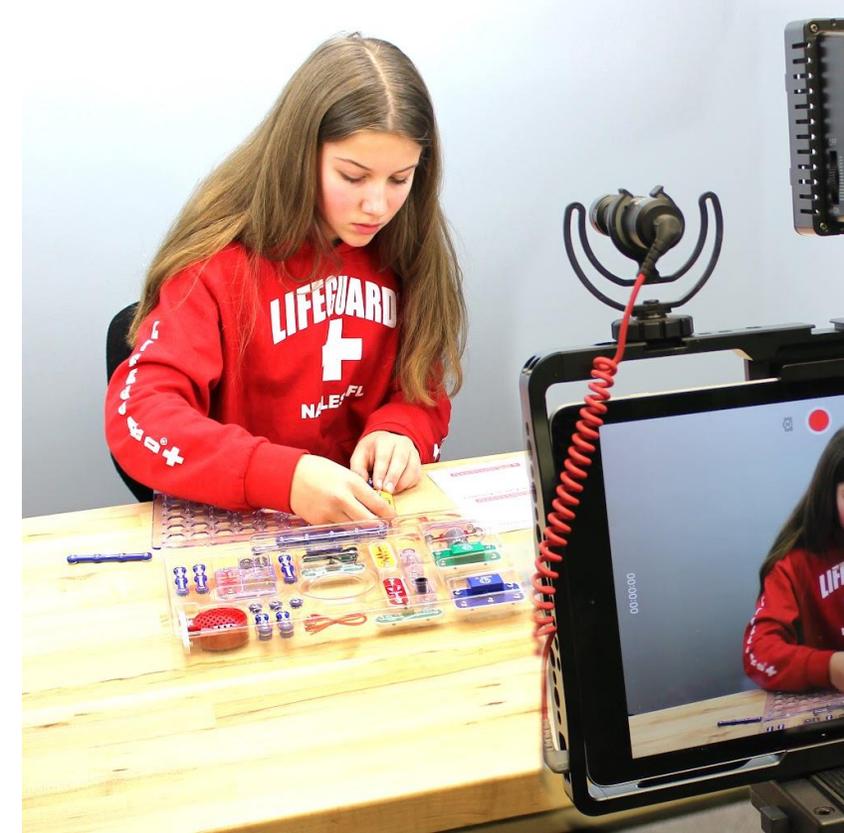- Heart rate testing
- Brain injury
- Steroid abuse

Veterinary Medicine

- **Veterinary Medicine**
- Learning CPR for dogs
- Common parasites
- Surgical prep
- Preventing disease transmission

Video Production

- Composition
- Camera & Lighting Techniques
- Basic & Advanced Editing
- Storyboards, Scripts
- Filming with Rule of Thirds

About Us

Overview

College & Career Ready Labs

Health Science Careers

Career Discovery Labs

BuildingSkills

Success

Health Science Careers®

This Learning System prepares middle school and high school students for careers related to medicine, nursing, and health science programs – from Biomedical Engineering to Veterinary Medicine.

- Customizable Content
- Flexible 10-Day Schedule
- Any Device/Any Time
- Two-Person Teams

- Authentic Medical Equipment
- NAF Approved
- University of California A-G Approved Course

Health Science Careers

PICS

This learning system prepares middle school and high school students for careers related to medicine, nursing, and health science programs – from Biomedical Engineering to Veterinary Medicine.

- **Available in 17 Health Science Career Areas**
- **Flexible 10 Day Schedule**
- **Accessible on Any Device, Any Time**
- **Two Person Teams**

- **Customizable Content**
- **Authentic Medical Equipment**
- **NAF Approved**
- **University of California A-G Approved Course**

BIOMEDICAL ENGINEERING
Training requirements • designing prosthetics • materials science • sensors • stents • muscle function analysis • craniotomy • organ replacement

BIOTECHNOLOGY R & D
Lab Technician roles • lab safety • testing antibiotics • measuring bacterial inhibition • pre-clinical testing • sunscreen testing • biodiversity • bacterial growth analysis • DNA modeling • clinical trial statistics • clinical experiments

CLINICAL LAB PRACTICES
Lab safety • phlebotomy • glucose testing • blood cell examination • instrument calibration • blood chemistry • bacterial identification • urinalysis • clinical trials • tissue examination

DENTISTRY
Anatomy & charting • hygiene • tooth decay • radiography • research • tooth decay removal • gum disease • impressions • casting tooth models • dental examinations • cavity filling

EMERGENCY MEDICAL TECHNICIAN
ABCs • vital signs & symptoms of injury • controlling bleeding • splints • virus vs. bacteria • infection control • wound care • EMT training • burn injuries & flammable textiles • CPR simulation

ENVIRONMENTAL HEALTH & SAFETY
Medical environmental safety • safety hazards & procedures • infection control • sharps disposal • sterilization • examining & analyzing bacteria • infections • sanitation • equipment calibration • emergency response • safety regulations

HEALTH INFORMATION MANAGEMENT
Medical records • coding • electronic health records • terminology • analyzing data • billing techniques & compliance • health insurance • HIPAA requirements & professional ethics • statistics

INTRO TO HEALTH SCIENCE FOUNDATIONS
Pathway exploration • anatomy & physiology • diseases & disorders • prevention • infection control procedures • safety practices • communication • teamwork • legal responsibilities • ethics in healthcare • employability skills

MEDICAL IMAGING
X-ray imaging & anatomy • positioning • identifying injuries • radiation • fluoroscopy • ultrasound & fetal measurements • endoscopy simulation • imaging technologies • radiation risks

MENTAL HEALTH
Depression • drug abuse & alcohol disorders • eating disorders • bullying • conflict resolution • values & empathy • stress evaluation • PTSD • recognizing signs & intervention

NURSING
Infection • sanitation • effective communication skills • vital signs • phlebotomy • sensing patient health • measurements, dilutions & calculations • patient education • suturing

OPHTHALMOLOGY
Eye anatomy & vision • vision testing • nearsightedness vs. farsightedness • lens identification • eye diseases • selecting eyeglasses • LASIK surgery • pediatric optometry

PHARMACOLOGY
Prescription reading & labels • compounding • calculating dosages • medical errors • tablet & capsule identification • medical mathematics • patient information sheets

SPEECH THERAPY
Speech anatomy • Autism • speech disorders • treatment • aphasia • abnormal swallowing • hearing testing • noise level testing & protection

SPORTS MEDICINE
RICE method • basket weave taping • heart testing • treating toe & arch injuries • knee injuries & rehabilitation • face mask & spine boarding • steroid use • traumatic brain injuries

THERAPEUTIC SERVICES
Physical vs. occupational • evaluation • range of motion • muscle testing • hip replacement recovery • evaluating stroke victim challenges • hand therapy exercises • pediatric therapy

VETERINARY MEDICINE
Disease transmission prevention • animal safety • dog & cat skeletal systems • fractures • X-rays • calculating pet costs • preventative veterinary services • parasite identification

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About Us
Overview
College & Career Ready Labs
Health Science Careers
Career Discovery Labs
BuildingSkills
Success

BuildingSkills®

BuildingSkills allows students to utilize industry standard tools and equipment as they explore careers in the construction industry - from Blueprint Reading to Finish Carpentry Skills.

- Customizable Content
- Flexible 10-Day Schedule
- Any Device/Any Time
- Two-Person Teams

Building Skills®
Construction Careers for the 21st Century

[PICS]

Building Skills®
Construction Careers for the 21st Century

Students are given the opportunity to explore interests and aptitudes for a career in the construction industry.

- 10 Hour Units / Customizable Content
- Video Content Featuring Industry Experts
- Best Practices & Career Exploration
- Accessible on Any Device, Any Time
- Industry-standard Equipment
- University of California A-G Approved Course

BLUEPRINT READING SKILLS
Sketching • symbols • plot plans • floor plans • elevation drawings • foundations • section drawings • schedules

CABINETMAKING SKILLS
Materials • cutting & edge banding • dado & biscuit joints • machining • prototyping • base & top construction • lamination • hardware & final assembly

COMMUNICATIONS SKILLS
Communication systems • connections & wiring • telephone extensions • installing & testing coax cables • multiple line installation • security systems

CONCRETE SKILLS
Volume estimation & calculations • concrete preparation • forming & rebar reinforcements • concrete mixtures • finishing

DRYWALL SKILLS
Drywall vs. Gypsum • steel framing • horizontal vs. vertical joints • butt & taper joints • corner bead • joint compound • finishing

ELECTRICAL SKILLS
Rough electrical installation • circuit installation • appliances & fixtures • safety features • EMT conduits • 3-way switches • green electrical practices

ESTIMATION SKILLS
Calculating costs • labor & material costs • project projections • documents, tools & schedules • estimations vs. final costs

FINISH CARPENTRY SKILLS
Window installation & leveling • flashing applications • shims, levels & squares • pre-hung door installation & casing • trim, molding & baseboards • measuring & cutting

GREEN CONSTRUCTION SKILLS
Photovoltaic panel • thermal efficiency • green plumbing • solar water heaters • green materials • efficient products • the four Rs

HAND TOOL SKILLS
Tool identification & applications • dovetail & mortise joints • tenon joints • simple machines • proper cutting & measuring

HVAC SKILLS
Electrical measurements • thermodynamics • climate control • air distribution • heat exchangers • HVAC systems & principles • A/C testing & maintenance • efficiency

MASONRY SKILLS
Concrete masonry units • mortar & mixing • wall building & course calculations • corner leads • tooling joints & pointing

OCCUPATIONAL HEALTH & SAFETY CONSTRUCTION
Physical & health hazards in construction • safety checklists • tool hazards • workers' rights • PPE • safety & health regulations

PAINTING SKILLS
Calculating amounts • wall preparation & clean up • wall & trim painting • techniques & patterns • wood preparation & staining • effective brush & roller cleaning techniques

PLUMBING SKILLS
Pipe types & applications • fixtures • joining procedures • drain, waste & vent systems • sink & toilet installation • gas piping

POWER TOOL SKILLS
Bill of materials • ripping & laminating • cut types • joints • cutting & machining • assembling & finishing • project design

ROOF FRAMING SKILLS
Roof slope & rafter length calculation • geometry • cutting • stacking • cut & fit lookouts • fascia board installation

SURVEYING & SITE PLANNING SKILLS
Topography map reading • blueprint reading • transits • measuring distances, directions & angles between points & elevations • lines & contours • site planning & modeling

TILE SETTING SKILLS
Measuring & calculations • cutting tile • laying & setting tile • grouting tile • setting vertical tile • finishing techniques

WALL FRAMING SKILLS
Measuring & framing members • layout & plating • framing walls • framing doors and windows • headers • standing walls • nail driving techniques

WEATHERIZATION SKILLS
Caulking • weather-stripping • sealing ducts • pipe insulation • window glazing • building insulation • duct and blower door testing • water efficiency • customer service
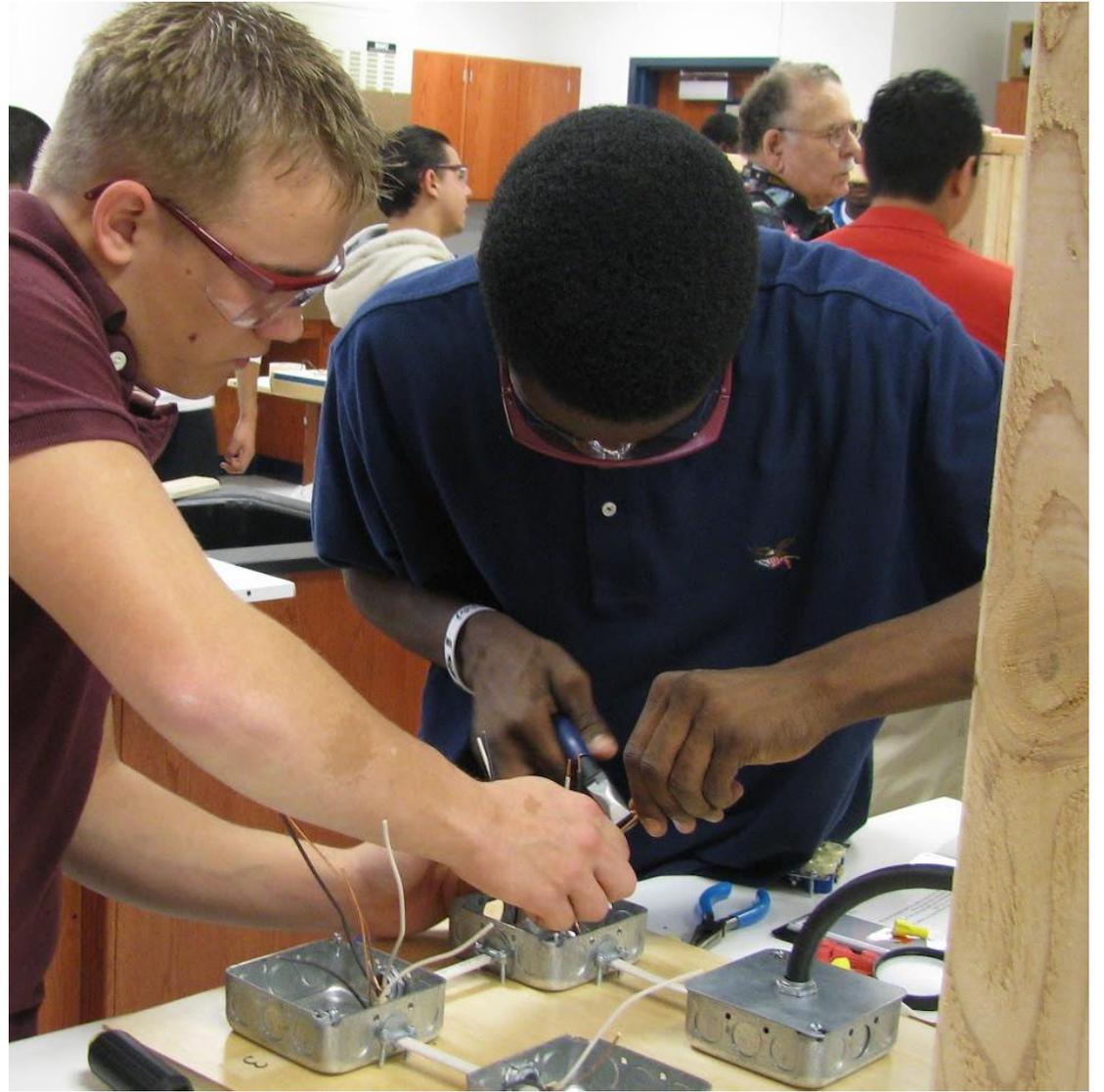
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Hand Tools

Power Tools

HOME
HOME
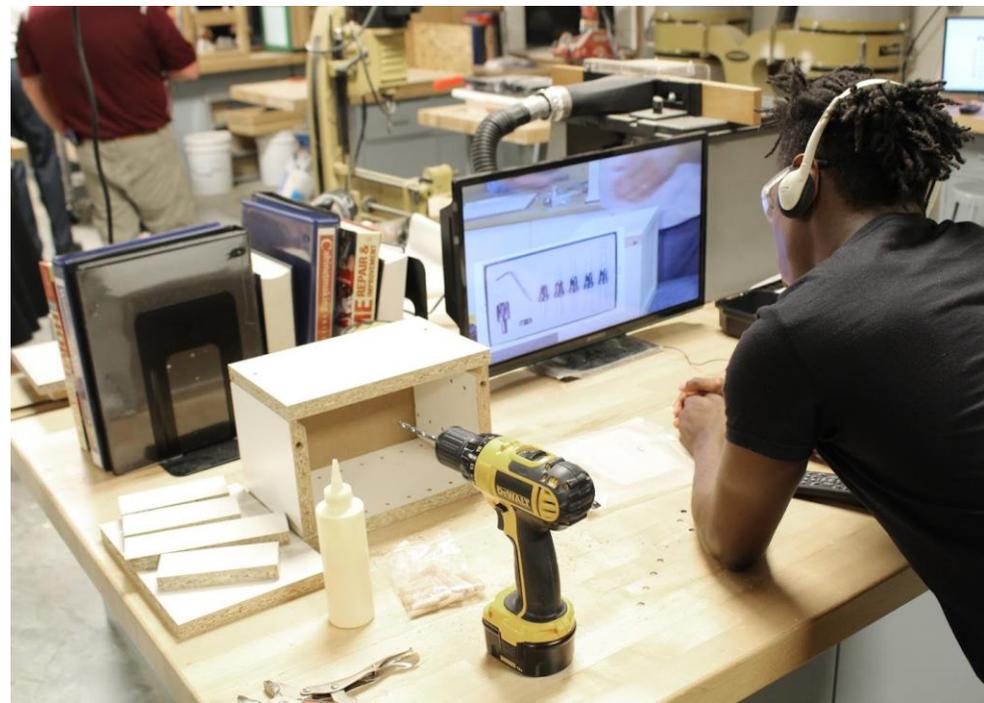
What's Included

CURRICULUM + ASSESSMENTS + LEARNING MANAGEMENT SYSTEM + TOOLS & MATERIALS

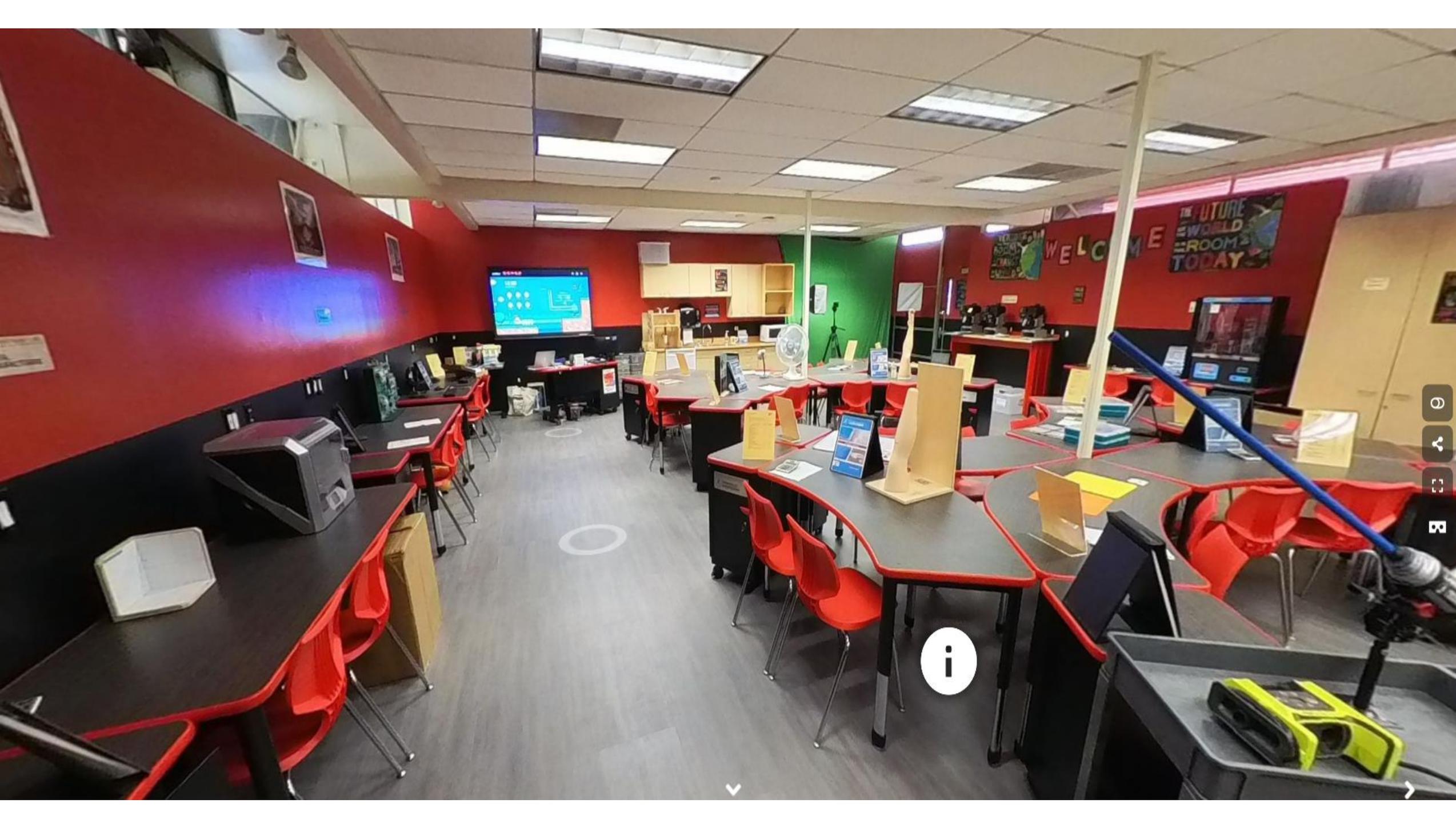STANDARDS-ALIGNED CTE + ACTIVITIES & SUPPLIES + SETUP & SUPPORT + TEACHER TRAINING

Paxton/Patterson
Paxton Content Learning Management System is in full FERPA compliance
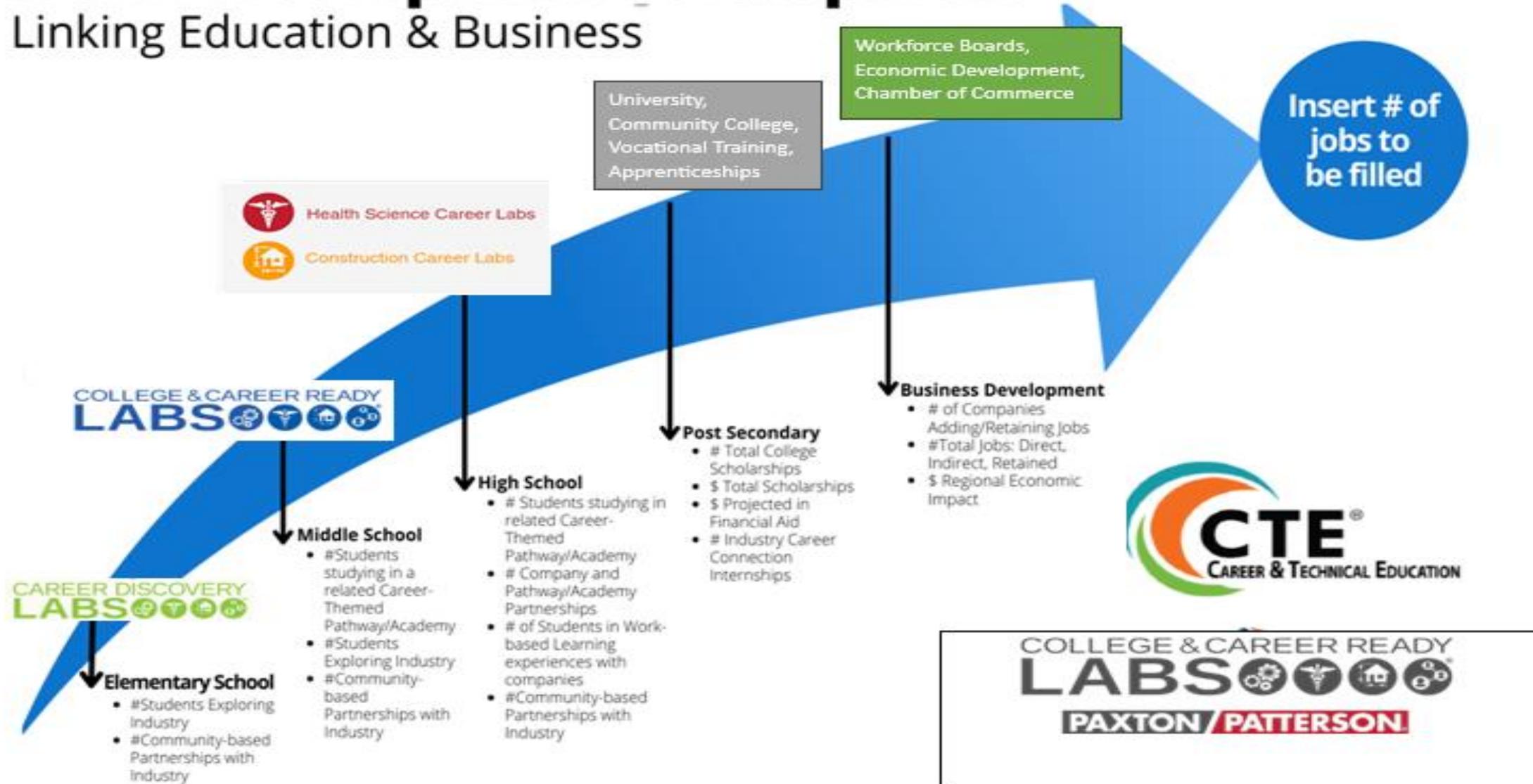Single Sign-on compatible with OpenID and Oauth 2.0

https://app.cloudpano.com/tours/4qv8kEh6p

https://app.cloudpano.com/tours/_LvPHSAN8

Workforce Pipeline Development
Linking Education & Business

Health Science Career Labs

Construction Career Labs

University,
Community College,
Vocational Training,
Apprenticeships

Workforce Boards,
Economic Development,
Chamber of Commerce

Insert # of
jobs to
be filled

COLLEGE & CAREER READY
LABS

CAREER DISCOVERY
LABS

Business Development
- # of Companies Adding/Retaining Jobs
- #Total Jobs: Direct, Indirect, Retained
- $ Regional Economic Impact

Post Secondary
- # Total College Scholarships
- $ Total Scholarships
- $ Projected in Financial Aid
- # Industry Career Connection Internships

High School
- # Students studying in related Career-Themed Pathway/Academy
- # Company and Pathway/Academy Partnerships
- # of Students in Work-based Learning experiences with companies
- #Community-based Partnerships with Industry

Middle School
- #Students studying in a related Career-Themed Pathway/Academy
- #Students Exploring Industry
- #Community-based Partnerships with Industry

Elementary School
- #Students Exploring Industry
- #Community-based Partnerships with Industry

CTE
CAREER & TECHNICAL EDUCATION

COLLEGE & CAREER READY
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Thank you!

Questions?