Arizona K-8 Career Literacy District Implementation Resources

Learning that works for Arizona
CTE

Welcome to AZ Career and Technical Education

Career Technical Education (CTE) provides students with the academic and technical skills, and with the knowledge and training necessary to succeed in future careers and to become lifelong learners. Foundational to CTE are rigorous program technical standards developed by business and industry. CTE prepares learners for the world of work by introducing them to workplace competencies, and makes academic content accessible to students by providing it in a hands-on context. In fact, the high school graduation rate for Arizona CTE concentrators (STUDENTS WHO COMPLETE A PROGRAM SEQUENCE) is about 93 percent – which is much higher than the Arizona average.

Our Vision: Every Arizona student has a developed career pathway.

Our Mission: Career and Technical Education will engage Arizona learners in relevant experiences leading to purposeful and economically viable careers.

Career and Technical Education is part of a well-rounded education and, as such, CTE programs are eligible to access Title IV funds.

azed.gov/cte/k-8-career-literacy

ARIZONA DEPARTMENT OF EDUCATION

Research: Early Grades

Early Career Exposures and Experiences
- Breeds purpose, meaning, and hope
- Enhances self-direction and curricular performance

Career Awareness Practices
- Integrate within core content
- Practice workplace skills within the classroom and school environment

Curricular Development Considerations:
- Standards based
- Anchored in career clusters
- Hands-on learning
- Parent participation

Source: Starting Early - Career Development

Standards and Strategies

CAREER LITERACY STANDARDS
Grades K-2

Students become familiar with careers through learning that connects classroom instruction to future work. Career awareness strategies expose students to a variety of career fields to stimulate interest in future work. Career-connected learning strategies may include:
- Classroom career speakers
- Workplace visits and interviews
- Introduction to Arizona career fields and pathways

Career Literacy Standards were approved by The Arizona Career and Technical Education Quality Commission in 2019.

STANDARD 1.0 CRITICAL THINKING AND PROBLEM-SOLVING

1.1 Recognize and solve problems using the best available resources
1.2 Identify and follow steps of the decision-making process to solve problems and make choices
1.3 Evaluate if a decision is good or bad, appropriate or inappropriate
1.4 Use digital web-based resources, gather data to make informed choices and solve problems
1.5 Apply critical thinking and problem-solving skills

STANDARD 2.0 COLLABORATION, TEAMWORK, AND LEADERSHIP

2.1 Develop collaboration skills to interact cooperatively with others
2.2 Demonstrate skills in working together, compromising, expressing opinions, and responding to criticism
2.3 Apply collaborative skills to group activities

STANDARD 3.0 CROSS-CULTURAL UNDERSTANDING AND INTERPERSONAL COMMUNICATION

3.1 Utilize illustration to effectively communicate ideas
3.2 Explain effective communication skills for presenting to an audience
3.3 Demonstrate how to communicate with respect for the beliefs and feelings of others
3.4 Exhibit grade-level oral and written communication skills that include being courteous, showing respect and empathy for others, accepting and following directions, performing as a team member, and showing respect for cultural diversity, individuals in nontraditional jobs, and individuals with disabilities
3.5 Identify personal wants, needs, and feelings and demonstrate how to communicate them appropriately

STANDARD 4.0 COMMUNICATION AND MEDIA FLUENCY

4.1 Identify ways to be safe online
4.2 Discuss examples of things that are safe to share online
4.3 Use digital media as a communication tool in classroom activities

STANDARD 5.0 ACCOUNTABILITY, PRODUCTIVITY, AND ETHICS

5.1 Describe personal responsibility and goals while identifying situations at home, school, and in the community where these are important

Plus

K-2

STANDARD 1.0 CRITICAL THINKING AND PROBLEM-SOLVING
The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time.

Questions
How do I solve problems? How can I make good choices and decisions? Is this a big problem or a small problem?

Strategies
- Read and discuss character decisions.
- Perform science experiments.
- Appraise personal likes and dislikes and identify careers that might be suited to personal likes.
- Identify qualifications needed to pursue traditional and nontraditional careers and occupations.
- Identify career interests, abilities, and skills.

STANDARD 2.0 COLLABORATION, TEAMWORK, AND LEADERSHIP
Collaboration and teamwork enable individuals or groups to achieve common goals with greater efficiency and success.

Questions
Why do I need to work with others? How do we work with others? Can you think of a way to work with others? What would you do if you and your partner disagree? How does working together help the group? How does working together help you?

Strategies
- Create social contracts.
- Display and discuss classroom and playground rules.
- Participate in organized sports or clubs.
- Describe responsibility and responsible behavior.

STANDARD 3.0 CROSS-CULTURAL UNDERSTANDING AND INTERPERSONAL COMMUNICATION
The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time.

azed.gov/cte/k-8-career-literacy#CLStandards

Standards and Strategies

CAREER LITERACY STANDARDS
Grades 2-4

Career awareness includes an understanding of the world or work and the knowledge and skills needed for traditional and nontraditional jobs and careers. These standards continue to build upon the K-2 framework. Students become familiar with careers through learning that connects classroom instruction to future work. Career awareness strategies expose students to a variety of career fields to stimulate interest in future work.

Standards approved by The Arizona Career and Technical Education Quality Commission in 2019.

STANDARD 1.0 CRITICAL THINKING AND PROBLEM-SOLVING
1.1 Recognize and solve problems using the best available resources
1.2 Identify and follow steps of the decision-making process to solve problems and make choices
1.3 Evaluate if a decision is good or bad, appropriate or inappropriate
1.4 Use digital web-based resources, gather data to make informed choices and solve problems
1.5 Apply critical thinking and problem-solving skills

STANDARD 2.0 CREATIVITY AND INNOVATION
2.1 Use brainstorming techniques individually and in groups to enhance creativity on assigned tasks

STANDARD 3.0 COLLABORATION, TEAMWORK, AND LEADERSHIP
3.1 Develop collaboration skills to interact cooperatively with others
3.2 Demonstrate and explain how collaborative skills support working effectively with others
3.3 Demonstrate skills in working together, compromising, expressing opinions, and responding to criticism
3.4 Apply collaborative skills to group activities

STANDARD 4.0 CROSS-CULTURAL UNDERSTANDING AND INTERPERSONAL COMMUNICATION
4.1 Develop effective written and/or oral communication skills for face-to-face and online communications
4.2 Explain effective communication skills for presenting to an audience
4.3 Demonstrate how to communicate with respect for the beliefs and feelings of others
4.4 Exhibit grade-level oral and written communication skills that include being courteous, showing respect and empathy for others, cooperating with and assisting others, accepting, and following directions, performing as a team member, and showing respect for cultural diversity, individuals in nontraditional jobs, and individuals with disabilities
4.5 Identify personal wants, needs, and feelings, and demonstrate how to communicate them appropriately

STANDARD 5.0 COMMUNICATION AND MEDIA FLUENCY
5.1 Identify modern digital media tools that are used for local and global communication
5.2 Discuss examples of digital media communication and how it is used daily in different settings
5.3 Identify ways to stay safe online
5.4 Use digital media as a communication tool in classroom activities

STANDARD 6.0 ACCOUNTABILITY, PRODUCTIVITY, AND ETHICS
6.1 Describe and identify situations where accountability and productivity are important

Plus →

2-4

STANDARD 1.0 CRITICAL THINKING AND PROBLEM-SOLVING
The ability to recognize a problem and apply critical thinking and problem-solving skills to solve problems is a lifelong skill that develops over time.

Questions
How do I solve problems? What are the steps in the decision-making process? How can I make good choices and decisions? How do I know which resources are the best?

Strategies
- Model evaluation techniques.
- Read books and discuss character decisions.
- Perform science experiments.
- Appraise personal likes and dislikes and identify careers that might be suited to personal likes.
- Identify qualifications needed to pursue traditional and nontraditional careers and occupations.
- Identify career interests, abilities, and skills.

STANDARD 2.0 CREATIVITY AND INNOVATION
Brainstorming activities enhance creative and innovative thinking in individual and group goal-setting and problem-solving.

Questions
What is brainstorming? How do we think of ideas? Am I creative?

Strategies
- Discuss inventions.
- Evaluate problems and brainstorm ideas to fix problems.

STANDARD 3.0 COLLABORATION, TEAMWORK, AND LEADERSHIP
Collaboration and teamwork enable individuals or groups to achieve common goals with greater efficiency.

Questions
Why do I need to work with others? How do we work with others? Can you think of a way to work with others?

Scaffolded K-2 Content

azed.gov/cte/k-8-career-literacy#CLStandards

Library Elementary Career Awareness

Set up a Career Discovery Corner in your library!

K-5 Career Discovery Corner
Kinsey Elementary School Library – Flagstaff, AZ

Kinsey Hotshots introduced a new section of our Library outfitted with age-appropriate career resources. Our students now have a space to discover new career possibilities!

Students are scheduled to visit the Library on **Discovery Day Fridays** to meet local professionals, to hear firsthand what happens on the job including hands-on experience with the tools of the trade. After the visit, students have time to access related books and materials, try on uniforms, and talk about the careers they are excited about. These positive experiences have inspired students to explore more about their career interests!

ADE Grades 2-4 Career Literacy Standard(s)

- **1.4 Critical Thinking and Problem-Solving Skills** Use digital web-based resources, gather data, and make informed choices
- **4.4 Interpersonal Communication** Exhibit grade-level reading and writing skills that include being courteous
- **5.4 Communication and Media Fluency** Use digital media as a communication tool in classroom activities
- **7.3 Principles of Money** Identify sources of income

ARIZONA DEPARTMENT OF EDUCATION

Sample Library Career Book List

Career Book List for Grades 3-5

Career Cluster	Title, Author	Publisher	Cost
Agriculture	Petroleum engineer (21st Century Skills Library: Cool STEAM Careers) by Mara, Wil (#0601YT9)	FollettBound Sewn — Cherry Lake Publishing, 2015	$20.37
Architecture & Construction	Architect (21st Century Skills Library: Cool STEAM Careers) by Bell, Samantha (#0902BV8)	FollettBound Sewn — Cherry Lake Publishing, 2016	$20.37
Arts, A/V Technology & Com	Medical illustrator (21st Century Skills Library: Cool STEAM Careers) by Yomtov, Nelson (#0600KT0)	FollettBound Glued — Cherry Lake Publishing, 2015	$20.37
Government & Public Admin	Water/wastewater engineer (21st Century Skills Library: Cool STEAM Careers) by Yomtov, Nelson (#0602CT5)	FollettBound Sewn — Cherry Lake Publishing, 2015	$20.37
Health Science	Sports medicine doctor (21st Century Skills Library: Cool STEAM Careers) by Bell, Samantha (#0903KVX)	FollettBound Sewn — Cherry Lake Publishing, 2016	$20.37
Information Technology	Video game designer (21st Century Skills Library: Cool STEAM Careers) by Cunningham, Kevin (#0903PV6)	FollettBound Sewn — Cherry Lake Publishing, 2016	$20.37
Law, Public Safety, Corrections & Security	Crime scene investigator (21st Century Skills Library: Cool STEAM Careers) by Orr, Tamra (#0902WV0)	FollettBound Sewn — Cherry Lake Publishing, 2016	$20.37
Science, Technology, Engineering & Mathematics	Robotics engineer (21st Century Skills Library: Cool STEAM Careers) by Mara, Wil (#0601ZT6)	FollettBound Sewn — Cherry Lake Publishing, 2015	$20.37
Science, Technology, Engineering & Mathematics	Observatory director (21st Century Skills Library: Cool STEAM Careers) by Yomtov, Nelson (#0601WT4)	FollettBound Sewn — Cherry Lake Publishing, 2015	$20.37
Science, Technology, Engineering & Mathematics	Volcanologist (21st Century Skills Library: Cool STEAM Careers) by Cunningham, Kevin (#0903SV8)	FollettBound Sewn — Cherry Lake Publishing, 2016	$20.37

CAREER EXPLORATION BOOKS FOR KIDS

Target Areas

Career Awareness

Kindergarten to 4th Grade

Develop positive attitudes about work.

Demonstrate problem-solving skills, communication, and teamwork.

Discover new careers and work-related vocabulary.

Growth →

Career Exploration

5th to 8th Grade

Develop creativity, tech, and financial skills.

Demonstrate ability to independently study career clusters and pathways.

Discover personality labels and interests as related to careers.

Create a high school career plan.

azed.gov/cte/k-8-career-literacy

Research: Middle School

This is the time when students can benefit the most from career exploration!

Curricular Development Considerations

✓ Required class with a dedicated teacher

✓ Anchored in career clusters

✓ Standards-based Instruction

✓ Experiential classroom learning

✓ Real-world connections

✓ Practice professional and employability skills

Connections from school to career lead to higher engagement!

Expected Student Outcomes

✓ Educational engagement

✓ Enhanced self-awareness

✓ Development of future goals

Sources: ACTE and eDynamic

Implementation Strategies

6 Strategies to Improve Programs, Schools, and District Levels for K-8 Career Literacy

SETTING STUDENTS ON THE PATH TO SUCCESS
K-8 Career Literacy

Early exposure and experiences in career areas **shape decisions** for middle to high school courses and career pathways.

Self and career awareness **breeds purpose** and **meaning**, enhancing **self-direction** and **hope**.

Research has identified **middle school** as a time when students can benefit the most from career exploration.
• Build Self-Awareness
• Learn about Potential Careers
• Develop a Plan to Reach Future Goals

Source: acteonline.org

1. Incorporate
Incorporate **career-related project-based learning** in the classroom.

2. Design
Design projects and activities to **develop employability and professional skills.**

3. Be Flexible
Be flexible when offering exploratory and **introductory CTE courses.**

4. Facilitate
Facilitate **academic and career planning** with scalable online tools.

5. Enable
Enable **short-term interactions with business and community leaders.**

6. Provide
Provide opportunities to **participate with CTSO's, clubs and career events.**

" A key way career exploration is provided to middle school students is through exploratory and introductory CTE courses. "

ADVANCE >> CTE
State Leaders Connecting Learning to Work

https://careertech.org/

Implementation Strategy 1

Plan for a dedicated teacher with CTE certification to teach career exploration courses

K-12 CTE Educator Certificates

In Arizona, there are [six options](#) to obtain CTE certification for industry professionals and academic educators.

CTE Certification Areas

- Agriculture
- Business and Marketing
- Family and Consumer Sciences
- Education and Training
- Health Sciences
- Industrial and Emerging Technologies

Learning that works for Arizona
CTE™

Implementation Strategy 1 PBL

FREE Resources!

azed.gov/cte/k-8-career-literacy

Develop employability skills - professional skills

CAREER LITERACY STANDARDS
Grades 5-8

Career exploration includes an investigation of the contemporary workplace with an understanding of the relationships among personal abilities, education, knowledge, and skills needed to pursue occupations and careers.

Career Literacy Standards were approved by The Arizona Career and Technical Education Quality Commission in 2019.

STANDARD 1.0 CAREER RESEARCH

1.1 Compare and contrast current and past employer hiring and employment practices related to substance use (e.g., tobacco, drugs, and alcohol)
1.2 Explain what is meant by "jobs" and "careers," and examine how each tends to be distributed regionally, nationally, and globally
1.3 Inventory the requirements for entering different career areas of interest using online job information, determining why those requirements are needed for success in a chosen career
1.4 Compare and contrast how traditional and non-traditional occupational roles have changed or remained the same regionally, nationally, and globally
1.5 Evaluate personal abilities, interests, and motivations and discuss how they might influence job and career selection
1.6 Identify common knowledge, skills, and abilities needed within career clusters
1.7 Relate academic achievement and course planning to secondary opportunities

STANDARD 2.0 CRITICAL THINKING AND PROBLEM-SOLVING SKILLS

2.1 Develop strategies for productive behaviors that impact critical thinking and problem-solving skills
2.2 Implement problem-solving strategies to solve a problem in school or real-world situations
2.3 Compare and contrast different strategies used in various organizations to solve problems
2.4 Design and implement a personal problem-solving plan using one or more problem-solving strategies

STANDARD 3.0 COLLABORATION

3.1 Determine an individual's responsibility for personal actions and contributions to group activities
3.2 Demonstrate the use of compromise, negotiation, and community-building strategies for carrying out tasks, assignments, and projects
3.3 Model leadership skills during classroom and extracurricular activities

MIDDLE SCHOOL

Plus

STANDARD 1.0 CAREER RESEARCH

The opportunity to explore career pathways through self-assessment and identification of interests and values of unique career preferences.

Questions

What are common skills needed across all jobs/careers? How do your abilities and interests influence your career choice? What's the difference between jobs and careers? What are some requirements to enter a job/career of your choice?

Strategies

- Develop an ADE ECAP that includes information about career areas of interest.
- Register, perform get-started tasks, and take the career interest assessment in My Future AZ.
- Identify high school and CTE courses and programs that support career or occupational areas of interest.
- Use workplace readiness skills and career information learned from job shadowing, high school visits, speakers, volunteering, or other career exploration activities to assist with career exploration.
- Evaluate employment trends (including job outlook and wage trends) in areas of career interest using online
- Use online state and federal agency resources to identify permitted or prohibited jobs for minors.
- Analyze a past or current local, national, or international incident that violated professional, legal, and/or ethical responsibilities in an employment setting, and explain the impact of the incident on employees and others.
- Compare and contrast current and past employer hiring and employment practices related to substance use

STANDARD 2.0 CRITICAL THINKING AND PROBLEM-SOLVING SKILLS

The ability to recognize a problem and apply critical thinking skills to develop solutions.

Questions

What strategies do I use to solve problems? How can I make good choices or decisions? What resources can I use to make decisions? How do I find the best resources (i.e. people, technology, community)?

Strategies

- Engage in project-based learning activities

STANDARD 3.0 COLLABORATION

Collaboration and teamwork enable individuals or groups to achieve collective goals and develop leadership skills.

Scaffolded 2-4 Content

azed.gov/cte/k-8-career-literacy#CLStandards

Implementation Strategy 3

Flexible curriculum

Possible Futures Career Exploration Curriculum

CENTER FOR THE FUTURE OF ARIZONA

- ➤ 72 digital lessons total (45 min. each)

- ➤ Inquiry-based & Hands-on approach

- ➤ Arizona Labor Market Data

- ➤ Built-in learning checks & Student Reflection Guides

- ➤ **Customizable** to your context!

  - ➤ Sample Scope & Sequences (Great for "push-in" model)
  - ➤ In-person & remote learning

- ➤ Complementary **Edge Factor** Video Playlist

- ➤ **Align to ECAP** elements!

- ➤ Connect to **My Future Az**

Preview lessons and request a consultation or virtual demo at:
https://www.arizonafuture.org/programs/workforce-programs/possible-futures-career-exploration-curriculum/

Implementation Strategy 4

Academic and Career Planning Tools

CTE Program Alignment

3 High Schools

MIDDLE SCHOOL

Where are Career and Technical Education (CTE) classes aligned to my career choice offered?

Bisbee High School

📍 Bisbee, AZ

- ✔ Construction & Architecture
- ✔ Business Management & Administration
- ✔ Health Sciences
- ✔ Hospitality & Tourism
- ✔ (IT) Information Technology
- ✔ Law, Public Safety, Corrections & Security
- ✔ (STEM) Science, Technology, Engineering & Mathematics
- ✔ Energy & Utilities

Learn More →

San Manuel High School

📍 San Manuel, AZ

- ✔ Agriculture, Food & Natural Resources
- ✔ Construction & Architecture
- ✔ Arts, Audio/Video Technology & Communications
- ✔ Manufacturing

Learn More →

STEDY- Yuma HS Satellite

📍 Yuma, AZ

- ✔ Agriculture, Food & Natural Resources
- ✔ Construction & Architecture
- ✔ Arts, Audio/Video Technology & Communications
- ✔ Business Management & Administration
- ✔ Education & Training
- ✔ Health Sciences
- ✔ (IT) Information Technology
- ✔ Manufacturing

Learn More →

My Future AZ

Plan for High School

High School Course Planning

Course Planning

Middle School is the right time to start thinking through your education plan. Consider high school graduation requirements, accelerated courses, CTE opportunities, and Dual Enrollment. Below are examples of high school courses to add to your plan based on the Top 5 Career that you saved to your profile. Talk to your counselors, teachers, and high school for specific guidance and information.

| Validation Engineers | ▼ | **From Top 5 Careers List** |

CREDITS

Minimum High School Graduation Requirements*

Credits ▼	Subjects ▼
4	English or English as a Second Language
1	Fine Arts or Career and Technical Education
3	History & Social Science
7	Locally Prescribed Courses
4	Mathematics
3	Science

*Arizona State Graduation Requirements. Your school / district's requirement and may be different. Check with ...

CORE+

Additional Classes to Consider*

Courses ▼

- ✔ AP Science
- ✔ Advanced math
- ✔ Calculus
- ✔ Computer Science
- ✔ Entrepreneurship
- ✔ Ethical and Legal Issues
- ✔ Global Issues
- ✔ Microbiology
- ✔ Sociology

CTE

Career Technical Courses*

Please note: CTE Courses for Cluster are not listed in order.

Courses ▼

- ✔ AgriScience
- ✔ Automation and Robotics
- ✔ Bioscience
- ✔ Construction Technologies
- ✔ Electronic Technologies
- ✔ Engineering
- ✔ Engineering and Robotics
- ✔ Software and App Design
- ✔ Solar Panel Installation
- ✔ Technology Devices Maintenance
- ✔ sUAS Drones

My Future AZ

Implementation Strategy 5
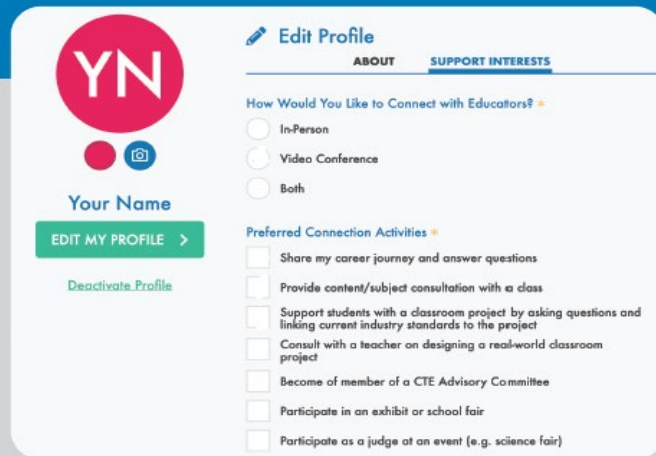
Enable short-term interactions with business and community members.

EDUCATOR PRO CONNECT

A platform that matches industry professionals with educators!
Register, build a profile and choose how you want to connect with industry professionals. Schedule volunteers one time or multiple dates during the school year!

Edit Profile
ABOUT   SUPPORT INTERESTS

How Would You Like to Connect with Educators? *
○ In-Person
○ Video Conference
○ Both

Your Name
EDIT MY PROFILE ›
Deactivate Profile

Preferred Connection Activities *
☐ Share my career journey and answer questions
☐ Provide content/subject consultation with a class
☐ Support students with a classroom project by asking questions and linking current industry standards to the project
☐ Consult with a teacher on designing a real-world classroom project
☐ Become of member of a CTE Advisory Committee
☐ Participate in an exhibit or school fair
☐ Participate as a judge at an event (e.g. science fair)

Start connecting today! *Register at EducatorPROConnect.org

FREE platform that matches schools with industry professionals!

Professionals are trained on how to:
- **share career paths answer student questions.**
- provide **content enrichment**
- support **project-based learning**

Office of the Maricopa County
School Superintendent
Steve Watson

EducatorProConnect.org

Career Based Clubs/Events

Career and Technical Student Organization (CTSO)
azed.gov/cte/ctso

Title IV-A Funding

Take advantage of existing funding to support your K-8 Career Literacy Implementation

Eligibility: ESEA Consolidate Grant (Entitlement)
Grades K-12

Director Approved Title I grant in the previous year includes Title IV-A
$10,000 minimum allocation

Staff
  Stipends Planning Time
  Salaries for new positions

Professional Development
  Conference fees
    (Staff & Students)
  Online learning opportunities
  Travel

Supplies
  Project-Based Learning
  Class supplies
  Educational Field Trips
  Supplemental library books

**Well-Rounded Education
College & Career Readiness**

Title IV-A Funding

Title IV-A measures a district's program in its entirety.

- ADE CTE recommendation for program effectiveness measurements based on best practices from Career Literacy Research:

Elementary

- College/Career Readiness Resource - Library Career Discovery Corner
- Educator stipends
- PBL curriculum tied to AZ Career Literacy Standards and to career clusters
- Number of Career Exposures
- Pre & Post Survey

Middle School

- Dedicated/Certified CTE Teacher
- Semester long course
- PBL curriculum tied to AZ Career Literacy Standards and to career clusters
- High School Placement
- Pre-Educational and Career Action Plan (ECAP)

Well-Rounded Education
College & Career Readiness

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ARIZONA DEPARTMENT OF EDUCATION