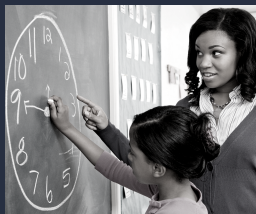


TEACHER IN THE WORKPLACE

Bridging the gap between the classroom, local
business and industry



TEACHER IN THE WORKPLACE AGENDA

Date: October 23, 2018

Time: 9am – 3pm

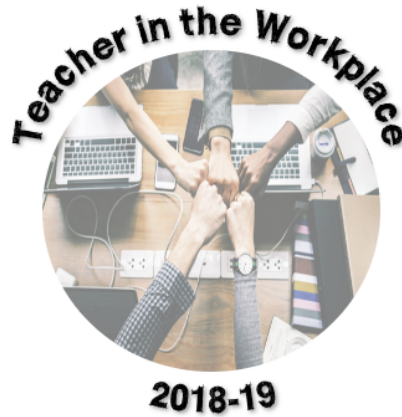
Facilitators: Alice Justice & Tanya Dynda

Day #1 Workshop

Time	Item
9:00am – 9:10am	Welcome – Introductions & Housekeeping
9:10am – 9:30am	Icebreaker Activity
9:30am – 9:45am	Debrief Icebreaker
9:45am – 10:15am	Success in the New Economy
10:15am – 10:40am	CPWDC – Who We Are as a Partner
10:40am – 10:50am	BREAK
10:50am – 11:10am	PA Career Zone – Interest Profiler
11:10am – 12:00pm	Part I: Understanding and Unpacking the CEW Standards in your Classroom
12:00pm – 12:30pm	LUNCH
12:30pm – 1:15pm	Part II: Understanding and Unpacking the CEW Standards in your Classroom
1:15pm – 1:30pm	Connecting Your District 339 Plan and Future Ready Index to the CEW Standards
1:30pm – 1:40pm	Business Partner Assignments & Participant Packet Review
1:40pm – 1:45pm	BREAK
1:45pm – 2:45pm	EduPlanet21 Unit Planner Introduction
2:45pm – 2:55pm	Exploring Your Business Partner Website & the Workforce Development Board (WDB) – Scavenger Hunt Homework
2:55pm – 3:00pm	Wrap-up & Questions

Thank you for participating in the “Teacher in the Workplace” program sponsored through CSIU and the Central Pennsylvania Workforce Development Corporation.





Overview: Teacher in the Workplace (TIW) offers a unique professional development opportunity connecting the classroom to the workplace. Teachers spend time in a workplace to learn through direct experience about trends, skill requirements and opportunities in industries related to their subject in order to enrich and strengthen their teaching. TIW experiences allow teachers to apply their content area standards along with the Career Education and Work (CEW) standards to lesson planning, thus making what they are teaching more relevant for the student. Finally, teachers are given the opportunity to interface with business partners to discover ways to bring industry into the classroom as well as getting students out into industries for experiences such as field trips, student internships, job shadowing, informational interviewing, and service learning.

Objectives and Expected Outcomes: What do you hope to get out of TIW and how will this translate to your work as a classroom teacher? Include curriculum or products you hope to develop through this experience. How will the externship experience lead to improved student learning? Please take a moment to respond below:

Guidelines: You will spend a **minimum of 21 hours** at one or more industries that have agreed to participate in this experience. You will set that up for some time between today's training and your summary training in March. You must clear your time out of school with your principal and make all the necessary arrangements for substitutes, lesson plans etc.

Activities for your TIW Experience: Some things that may occur while visiting your business include, but are not limited to:

- interviewing various departments such as Human Resources or Research & Development
- working alongside someone sharing their day-to-day responsibilities; observing a team working together
- learning a particular skill, etc.
- gather pictures and/or videos to include in your multi-media project *

You will have several graphic organizers to complete that will help you develop your lesson plan and accompanying multi-media project (video/power point) to support your lesson. You will receive a "Permission to Take Pictures or Video Tape" document you will have signed that will allow you to use the pictures/videos you gather in your multi-media project.

* If permitted by your participating business, utilize the [Permission to Take Pictures or Video form](#) found in the Forms section.

Contacting Businesses to Schedule Visits: Today you will receive contact information for the businesses you have been paired with for this activity. It will be your responsibility to contact the business and set up the visit times.

Contact Name:	Title:	Phone Number:	Email Address:



POTENTIAL ACTIVITIES

TEACHER IN THE WORKPLACE OPPORTUNITY

Sometimes educator and business partners are unsure of how to organize a Teacher in the Workplace (TIW) experience. Below is a comprehensive list of types of activities previous participants and industry partners have utilized in developing their visit. It is an extensive list so **don't feel obligated or expect to complete everything on the list**. Just use the suggestions as brainstorming fuel to develop activities everyone is comfortable with in order to have a successful TIW experience for all.

1. Visit a variety of departments and functions within the company, to obtain a full view of the opportunities available.

2. Take a brief tour of the facilities and departments:
 - offices
 - meeting rooms
 - copy rooms
 - kitchen/cafeteria
 - common areas, "water cooler", bulletin boards/announcements
 - training facilities.

3. Receive an orientation to the "human resources" department/functions:
 - application materials
 - job listings
 - working conditions and benefits (hours, flexibility, vacation/leave opportunities, pension/profit-sharing plans, other incentives)
 - summer hire programs
 - sample resumes
 - salary ranges for various positions
 - performance review processes and tools
 - overview of ways they are currently working with educators in any capacity



4. Conduct informational interviews; obtain information on the following:
 - the variety of occupations and positions in your industry, company and department
 - educational and skill requirements for your position and others in your department
 - required professional development in order to maintain position and/or required certifications.
 - the career path you took to your position
 - "a day in the life..."
 - common and more unusual problems and challenges
 - quality and performance standards and measurement
 - "what I like most and least about working in this industry"
 - current and future skill needs
 - short- and long-term industry trends

5. Obtain materials that help shed light on the company and industry:
 - organization chart
 - annual report
 - current and future skill needs
 - short and long term business trends
 - brochures
 - sample products: reports, presentation materials, film clips, photographs

6. Observe:
 - current and future skill needs
 - meetings
 - informal "coffee talk"
 - presentations
 - interviews
 - screenings
 - lunch time/breaks

7. Work in a given position for some period of time, under the supervision of someone who can provide orientation and training in that job.



Expectations for Follow-up Training Day:

Once you have completed your TIW experience, we will meet for the post-training workshop. Below are the dates and locations for the mandatory follow-up workshop:

March 12, 2019: CSIU 16, 90 Lawton Lane, Milton

March 13, 2019: CIU10, 60 Decibel Road, State College

You will be required to develop the following materials for your classroom:

1. **Lesson Plan** - you will be introduced to EduPlanet21's "Unit Planner" and will utilize it to develop a lesson plan for your students. You will be integrating the CEW Standards as well as your own content standards into the development of that lesson plan.
2. **Digital support product** - you will be developing an associated product utilizing your preferred platform that will accompany your lesson plan. It may be as simple as a power point presentation or as involved as an iMovie. You will utilize the information you gather during your industry visits to "bring that industry into your classroom." It may involve pictures, videos, interviews, etc.

Required Documents to Submit:

To monitor successful completion of your participation in the Teacher in the Workplace, you will be required to submit the following documentation during the post-training session in March:

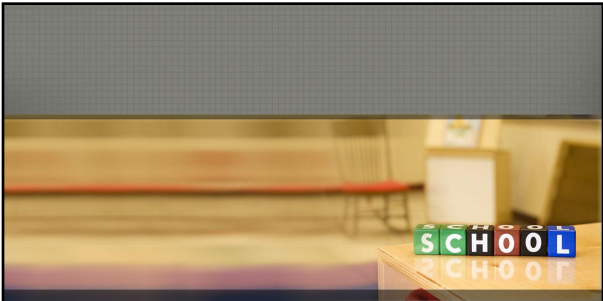
1. Work Plan
2. Worksite Time Log
3. Photo Permission Form

TIW Scavenger Hunt



You will have **20 minutes** to complete the following activity. You must interview at least **4 different** people and have them answer the following questions. Make sure you record who you interviewed and their answers to each question posed.

Question	1 st Person Interviewed Name:	2 nd Person Interviewed Name:	3 rd Person Interviewed Name:	4 th Person Interviewed Name:
Do you know your Holland Codes and if so what are they? (i.e ISA Investigative, Social, Artistic)				
What was your first job and what was the most important thing you took away from that experience?				
If you weren't an educator what other career do you think would be a good fit for your personality, skills and interests?				
What things do you believe students should consider when making a decision about post-secondary options?				



Teacher in the Workplace!

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- Introductions & Housekeeping
- Agenda- 9AM to 3PM (see agenda)



Pennsylvania CareerZone

Go to... <https://www.pacareerzone.org/ip>



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Getting to Know Us

Using the provided graphic organizer, you will have **20 minutes** to interview a minimum of **4** different participants.

Record the name of each interviewee and their responses to each question.



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Success in the New Economy

"Education is **core** to our economy. But, in order to guide our educational systems and **maximize** future income, we must **understand** the **misalignment** between **education** and our **workforce**."

~ Kevin Fleming

 <http://bit.ly/2NffW2d>

Your Thoughts?

- Grab your phone

- Go to...
- Enter the code **90 10 14** and vote!
 [Live Results](#)

SCHOOL

Pennsylvania Career Education and Work Standards (CEW)

The CEW Standards are organized into four strands with benchmarks at the **3rd**, **5th**, **8th** and **11th** grade levels.

- 13.1 - **Career Awareness and Preparation**
- 13.2 - **Career Acquisition** (Getting a Job)
- 13.3 - **Career Retention and Advancement**
- 13.4 - **Entrepreneurship**

SCHOOL

CEW Posters

- Download the app HP Reveal (formerly Aurasma)
- Create your account
- Search **PA-CEW** Standards and then follow
- Use the scanner to learn more about the CEW Strands



Unpacking the CEW Standards

Unpacking the Career Education and Work (CEW) Standards				
Grade Band: _____	13.1 Career Awareness and Preparation	13.2 Career Acquisition (Getting a Job)	13.3 Career Retention and Advancement	13.4 Entrepreneurship
Nouns				
Verbs				
Products				
Vocabulary				
Content Standards you are considering pairing with CEW Standards				

- utilize the provided handout in your packet



13.1 - Career Awareness and Exploration

What type of classroom activities can be used to teach and assess these standards?



Elementary Grades



- ★ videos of people doing cool jobs (related to ALL core subjects)
↓
passions/interests can lead to rewarding careers...
- ★ highlight male nurses & female soldiers
↓
prevent development of stereotypical perceptions (could later be barriers)



13.1 - Career Awareness and Exploration

What type of classroom activities can be used to teach and assess these standards?



Middle/High School Grades

- ★ develop activities that simulate "real life" situations
↓
passions/interests can lead to rewarding careers...
- ★ create formative & summative assessments at the higher Bloom's levels and DOK 3 & 4 levels
↓
explore how they feel about tasks they may find in content related careers



13.1 - Career Awareness and Exploration

What type of classroom activities can be used to teach and assess these standards?



...will have opportunities to observe problem-solving in a particular industry which you can use as a springboard for developing authentic tasks for your classroom.



- 5th Grade Teacher - experienced a bakery**
- developed a thematic unit based upon the popular TV show, "Cupcake Wars"
 - teams of students can earn points for one month based on performance of a number of tasks
 - math problems → based on recipe measurements
 - writing assignments → placing ads in the local paper → articles for a food magazine
 - taping an advertisement for the local TV station



13.1 - Career Awareness and Exploration

What type of classroom activities can be used to teach and assess these standards?

MIDDLE/HIGH SCHOOL



- Science Teacher - experienced a greenhouse**
- developed a research simulation where students determine the optimum growing conditions for starting tomato plants
- Geometry Teacher - experienced an architectural firm**
- students visit a model home designed by the firm
 - assigns student teams to different rooms in the home to draw to scale (teaching concepts related to proportionality)



13.2 - Career Acquisition

What type of classroom activities can be used to teach and assess these standards?

- ★ helping your students to recognize how their strengths interface with their passions and how best to represent that in their...
 - schoolwork
 - social interactions
 - activities
 - post-secondary applications
 - future job interviews

- ★ helping your students to recognize the "classic" workplace skills

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13.2 - Career Acquisition

What type of classroom activities can be used to teach and assess these standards?

- ★ developing appropriate speaking, listening, and writing skills as they relate to career acquisition

- ★ developing appropriate research skills in order to identify potential careers and eventually to understand labor market information and how that should impact career decision-making

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13.2 - Career Acquisition

What type of classroom activities can be used to teach and assess these standards?

Elementary Grades

- practice greeting people in different situations
- locate places where jobs are advertised
- write letters of interest
- complete a career plan organizer based up on a career speaker and/or video
- practice workplace skills
 - time-management
 - dependability
 - cooperation

Middle/High School Grades

- write resumes
- conduct mock interviews
- career research projects
- practice workplace skills in project-based learning activities
 - time-management
 - dependability
 - cooperation

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13.2 - Career Acquisition

How Do Experiences for Teachers in the Workplace Enhance the delivery of these Standards?

GET
INSPIRED
BY THESE
EXAMPLES



ELEMENTARY LEVEL

Teacher - experienced a local TV station

- developed a lesson plan where students had to conduct **and** videotape an interview with a teacher or administrator in the school
- research the position of person being interviewed in order to develop appropriate questions
- listening, speaking, and research skills

SCHOOL

13.2 - Career Acquisition

How Do Experiences for Teachers in the Workplace Enhance the delivery of these Standards?

GET
INSPIRED
BY THESE
EXAMPLES



HIGH SCHOOL LEVEL

Social Studies Teacher - experienced a law firm

- developed an authentic assessment where students were required to research and present support for **and** against rezoning a park area for commercial use
- required to develop a written plan and an oral presentation as a team

SCHOOL

13.3 - Career Retention and Advancement

What type of classroom activities can be used to teach and assess these standards?

- ★ teaching students how to work together and problem-solve is CORE to this strand

↓
providing feedback on how they are doing this is key

↓
School-wide behavior plans



SCHOOL

13.3 - Career Retention and Advancement

What type of classroom activities can be used to teach and assess these standards?

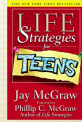
- ★ teaching students how to work together and problem-solve is CORE to this strand

↓
providing feedback on how they are doing this is key

RESOURCES: "The Seven Habits of Highly Effective Teens," or "Life Strategies for Teens"



Middle/High School Grades



13.3 - Career Retention and Advancement

How Do Experiences for Teachers in the Workplace Enhance the delivery of these Standards?

GET INSPIRED BY THESE EXAMPLES



ELEMENTARY LEVEL

4th Grade Teacher - experienced the human resources department of a manufacturing company

- developed a First Friday lesson plan called "How Sharp Is Your Saw?"
- invited Director of Human Resources to be a guest speaker in the first month of school to focus on importance of workplace skills
- each month after - focus on 1-2 of these skills
 - define the skills
 - identify what they look like in various settings
 - assess themselves on these skills



13.3 - Career Retention and Advancement

How Do Experiences for Teachers in the Workplace Enhance the delivery of these Standards?

GET INSPIRED BY THESE EXAMPLES



HIGH SCHOOL LEVEL

Art Teacher - experienced a graphic design company

- took class to company and spent a few hours with a design team - importance of collaboration, communication, and leadership when designing
- CULMINATING ACTIVITY: design a new banner for the high-school entryway
 - divided into groups of 4
 - write a description and produce a sample
 - Teachers/Administrators - selected a proposal
 - Assess - teamwork and self on skills



13.4 - Entrepreneurship

What type of classroom activities can be used to teach and assess these standards?

- **Elementary**– Introducing the idea of “being your own boss” is very exciting for elementary students. Using literature such as “Arthur’s Pet Business” or “The Start Up Club” is a great way to begin to introduce the risks and rewards of owning your own business. Having a school wide “Community Day” where each classroom provides a service or product is an exciting way to address the CEW 13.4 Entrepreneurship Standards. Providing students with “Entrepreneurship Trait” graphic organizers when they read biographies is another way to address standards in this strand.

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13.4 - Entrepreneurship

What type of classroom activities can be used to teach and assess these standards?

- **Middle and High School** – Teaching entrepreneurship in high school can be done with a variety of authentic projects/assessments. Utilizing career-based classes to introduce the concepts of a basic business plan as well as analyzing the risks and rewards of owning your own business addresses the standards and goes far beyond business ownership. Character analysis of successful entrepreneurs in different fields also helps students begin to recognize what skills they have and what they might need to develop if they plan on owning their own business someday. Completing tasks such as these strengthens student self-awareness and planning which is applicable to a variety of different decision-making tasks that lie ahead.

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13.4 - Entrepreneurship

How Do Experiences for Teachers in the Workplace Enhance the delivery of these Standards?



ELEMENTARY LEVEL

1st Grade Teacher - experienced a food truck driver

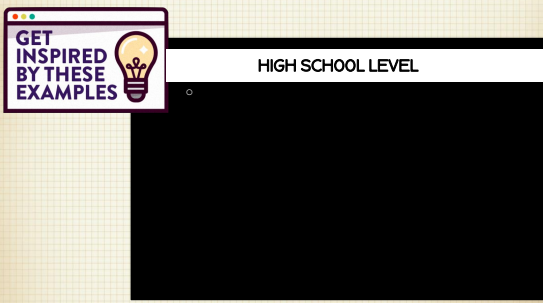
- developed a video of his experience & showed it to his class
- invited food truck owner to his class as a guest speaker
- each student is given a “food truck” and must...
 - decide what to sell
 - create a video that
 - describes their truck & what they sell
 - show what will be FUN and DIFFICULT about their business

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13.4 - Entrepreneurship

How Do Experiences for Teachers in the Workplace Enhance the delivery of these Standards?




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SCHOOL



Connecting YOUR Standards with the CEW Standards

<https://www.pdesas.org/Standard/Search#>



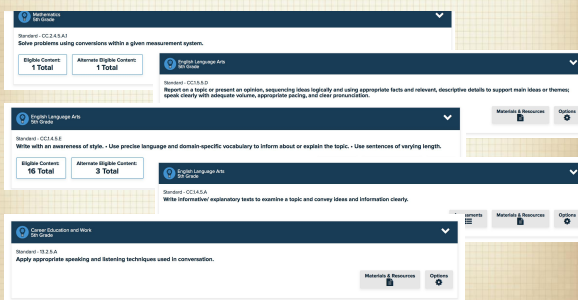
Use the dropdown boxes to choose...

Grades Select Grade(s)	+	Subjects Select Subject(s)	+	Courses Select Course(s)	+
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SCHOOL

Remember Cupcake Wars?



The screenshot shows search results for 'Cupcake Wars' across three categories: Mathematics, English Language Arts, and Computer Education and Work. Each category lists standards and the number of content items found.

Category	Standard	Right Content	Alternate Right Content
Mathematics	Standard: CC.2.8.3-4 Solve problems using compasses with a given measurement system.	1 Total	1 Total
	Standard: CC.3.8.3-5 Report on a map or present on a topic, supporting ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly with adequate volume, appropriate pacing, and clear pronunciation.	0 Total	0 Total
English Language Arts	Standard: CC.4.1.1 With an awareness of style, use precise language and domain-specific vocabulary to inform about or explain the topic. Use sentences of varying length.	16 Total	3 Total
	Standard: CC.4.2.1-2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	0 Total	0 Total
Computer Education and Work	Standard: CC.2.1.1 Apply appropriate speaking and listening techniques used in conversation.	0 Total	0 Total

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Career Readiness for PA Students

Are your students **READY** for their future?

- Do you have the **classroom resources** to help students achieve their goals?
- Are your students engaged in **meaningful activities** to support their career portfolio?
- What opportunities are available for you and your students to expand knowledge of the **21st century workplace**?
- Do your students have a **post-secondary pathway for success**?



<https://goo.gl/c5j8WN>

SCHOOL

Intersection with District 339 Plan & PA Future Ready Index

K-12 Guidance Plan linked to 339 Plan -1989:Original legislation

"There shall be a written plan on file, approved by the local board of school directors, for the development and implementation of a comprehensive, sequential program of guidance services for kindergarten through 12th grade."

PA Future Ready Index - PA's Plan to Implement ESSA - 2015

- ★ State Assessment Measures
- ★ On-Track measures
- ★ College and Career Readiness Measures



Where do these two "laws" intersect with Teacher In the Workplace?

SCHOOL

What to Expect/Business Assignments

SUGGESTED



SCHOOL

REQUIRED DOCUMENTATION



You will submit the following completed documents on the last day (March):

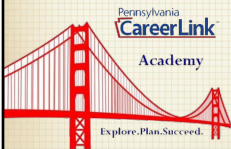
- Work Plan
- Time Log
- Photo Permission Form



Don't Forget Your Local Economy



Introduction to CPWDC



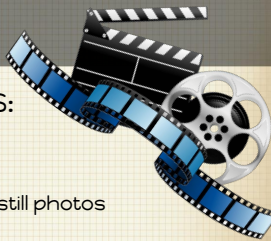
Alexa Hann
Senior Youth Coordinator



Hook/Closure

MINIMUM REQUIREMENTS:

- 3-5 minutes
- May include video and still photos
- Should include one or more photos/clips of employees from industry (if permitted)
- Should make direct connection to standard/standards you are teaching in your lesson



Hook and Closure Ideas

- Employees sharing how interests and skill interface with current position
- Employers talking about workplace skills that enhance career retention and advancement and/or behaviors that impede success in the industry
- Clips/pictures of group problem-solving
- Clips/pictures of products (scale drawing, completed calculations worksheets, written communications, etc.
- Employee talking about training that was required to secure the job
- Employee talking about how academic classes in school relate to the job they do
- Pictures of technical manuals that employees must use
- Pictures of the Organizational Chart of the Business
- Pictures of various steps in the production process
- Employers describing or pictures of pre-employment assessments that potential employees must complete
- Clips of consensus building you observe at your business/industry
- Employees/employers talking about the importance of technology in this industry
- Sample resumes of people that have applied for jobs at your industry/business
- Schedules or Budget samples from the workplace



EduPlanet21 - Unit Planner



Stacy Tinsley
Business Development Manager



Conclusion

- Revisit expectations & timeline
- Any Questions?



Workforce Development Board
and to all of you!



Unpacking the Career Education and Work (CEW) Standards

Grade Band: _____	13.1 Career Awareness and Preparation	13.2 Career Acquisition (Getting a Job)	13.3 Career Retention and Advancement	13.4 Entrepreneurship
Nouns				
Verbs				
Products				
Vocabulary				
Content Standards you are considering pairing with CEW Standards				

Academic Standards for Career Education and Work



Pennsylvania Department of Education

Academic Standards for Career Education and Work

XXXVII. TABLE OF CONTENTS

Introduction.....XXXVIII.

THE ACADEMIC STANDARDS

Career Awareness and Preparation 13.1.

- A. Abilities and Aptitudes*
- B. Personal Interests*
- C. Non-Traditional Workplace Roles*
- D. Local Career Preparation Opportunities*
- E. Career Selection Influences*
- F. Preparation for Careers*
- G. Career Plan Components*
- H. Relationship between Education and Career*

Career Acquisition (Getting a Job) 13.2.

- A. Interviewing Skills*
- B. Resources*
- C. Career Acquisition Documents*
- D. Career Planning Portfolios*
- E. Career Acquisition Process*

Career Retention and Advancement 13.3

- A. Work Habits*
- B. Cooperation and Teamwork*
- C. Group Interaction*
- D. Budgeting*
- E. Time Management*
- F. Workplace Changes*
- G. Lifelong Learning*

Entrepreneurship 13.4.

- A. Risks and Rewards*
- B. Character Traits*
- C. Business Plan*

Glossary

Academic Standards for Career Education and Work

XXXVIII. INTRODUCTION

The Academic Standards for Career Education and Work reflect the increasing complexity and sophistication that students experience as they progress through school. Career Education and Work Standards describe what students should know and be able to do at four grade levels (3, 5, 8 and 11) in four areas:

- ◆ 13.1 Career Awareness and Preparation
- ◆ 13.2 Career Acquisition (Getting a Job)
- ◆ 13.3 Career Retention and Advancement
- ◆ 13.4 Entrepreneurship

Pennsylvania's economic future depends on having a well-educated and skilled workforce. No student should leave secondary education without a solid foundation in Career Education and Work. It is the rapidly changing workplace and the demand for continuous learning and innovation on the part of the workers that drive the need to establish academic standards in Career Education and Work.

Through a comprehensive approach, Career Education and Work Standards complement all disciplines and other academic standards. If Pennsylvania's students are to succeed in the workplace, there are certain skills that they need to obtain prior to graduation from high school. These skills have been identified in the Career Education and Work Standards, but it is up to individual school districts to decide how they are to be taught. Districts can implement integration strategies within existing disciplines or can implement stand-alone courses to specifically address these standards.

A glossary is included to assist the reader in understanding terminology contained in the standards.

13.1. Career Awareness and Preparation			
13.1.3. GRADE 3	13.1.5. GRADE 5	13.1.8. GRADE 8	13.1.11. GRADE 11
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:</i>			
<p>A. Recognize that individuals have unique interests.</p> <p>B. Identify current personal interests.</p> <p>C. Recognize that the roles of individuals at home, in the workplace and in the community are constantly changing.</p> <p>D. Identify the range of jobs available in the community.</p>	<p>A. Describe the impact of individual interests and abilities on career choices.</p> <p>B. Describe the impact of personal interest and abilities on career choices.</p> <p>C. Relate the impact of change to both traditional and nontraditional careers.</p> <p>D. Describe the range of career training programs in the community such as, but not limited to:</p> <ul style="list-style-type: none"> • Two-and-four year colleges • Career and technical education programs at centers (formerly AVTSs) and high schools • CareerLinks • Community/recreation centers • Faith-based organizations • Local industry training centers • Military • Registered apprenticeship • Vocational rehabilitation centers • Web-based training 	<p>A. Relate careers to individual interests, abilities, and aptitudes.</p> <p>B. Relate careers to personal interests, abilities, and aptitudes.</p> <p>C. Explain how both traditional and nontraditional careers offer or hinder career opportunities.</p> <p>D. Explain the relationship of career training programs to employment opportunities.</p>	<p>A. Relate careers to individual interests, abilities, and aptitudes.</p> <p>B. Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.</p> <p>C. Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.</p> <p>D. Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to:</p> <ul style="list-style-type: none"> • Career days • Career portfolio • Community service • Cooperative education • Graduation/senior project • Internship • Job shadowing • Part-time employment • Registered apprenticeship • School-based enterprise

<p>E. Describe the work done by school personnel and other individuals in the community.</p> <p>F. Explore how people prepare for careers.</p> <p>G. Explain why education and training plans are important to careers.</p>	<p>E. Describe the factors that influence career choices, such as, but not limited to:</p> <ul style="list-style-type: none"> • Geographic location • Job description • Salaries/benefits • Work schedule • Working conditions <p>F. Investigate people’s rationale for making career choices.</p> <p>G. Identify the components of a career plan, such as, but not limited to:</p> <ul style="list-style-type: none"> • Beginnings of career portfolio • Career goals • Individual interests and abilities • Training/education requirements 	<p>E. Analyze the economic factors that impact employment opportunities, such as, but not limited to:</p> <ul style="list-style-type: none"> • Competition • Geographic location • Global influences • Job growth • Job openings • Labor supply • Potential advancement • Potential earnings • Salaries/benefits • Unemployment <p>F. Analyze the relationship of school subjects, extracurricular activities, and community experiences to career preparation.</p> <p>G. Create an individualized career plan including, such as, but not limited to:</p> <ul style="list-style-type: none"> • Assessment and continued development of career portfolio 	<p>E. Justify the selection of a career.</p> <p>F. Analyze the relationship between career choices and career preparation opportunities, such as, but not limited to:</p> <ul style="list-style-type: none"> • Associate degree • Baccalaureate degree • Certificate/licensure • Entrepreneurship • Immediate part/full time employment • Industry training • Military training • Professional degree • Registered apprenticeship • Tech Prep • Vocational Rehabilitation Centers <p>G. Assess the implementation of the individualized career plan through the ongoing development of the career portfolio.</p>
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<p>H. Explain how workers in their careers use what is learned in the classroom.</p>	<p>and costs</p> <p>H. Connect personal interests and abilities and academic strengths to personal career options.</p>	<ul style="list-style-type: none"> • Career goals • Cluster/pathway opportunities • Individual interests and abilities • Training/education requirements and financing <p>H. Choose personal electives and extra curricular activities based upon personal career interests, abilities and academic strengths.</p>	<p>H. Review personal high school plan against current personal career goals and select postsecondary opportunities based upon personal career interests.</p>
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13.2. Career Acquisition (Getting a Job)			
13.2.3. GRADE 3	13.2.5. GRADE 5	13.2.8. GRADE 8	13.2.11. GRADE 11
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:</i>			
<p>A. Identify appropriate speaking and listening techniques used in conversation.</p> <p>B. Discuss resources available in researching job opportunities, such as, but not limited to:</p> <ul style="list-style-type: none"> • Internet • Magazines • Newspapers <p>C. Compose a personal letter.</p>	<p>A. Apply appropriate speaking and listening techniques used in conversation.</p> <p>B. Identify and review resources available in researching job opportunities, such as, but not limited to:</p> <ul style="list-style-type: none"> • Internet • Magazines • Newspapers <p>C. Compose and compare a business and a personal letter.</p>	<p>A. Identify effective speaking and listening skills used in a job interview.</p> <p>B. Evaluate resources available in researching job opportunities, such as, but not limited to:</p> <ul style="list-style-type: none"> • CareerLinks • Internet (i.e. O-NET) • Networking • Newspapers • Professional associations • Resource books (that is <i>Occupational Outlook Handbook, PA Career Guide</i>) <p>C. Prepare a draft of career acquisition documents, such as, but not limited to:</p> <ul style="list-style-type: none"> • Job application • Letter of appreciation following an interview • Letter of introduction • Request for letter of recommendation • Resume 	<p>A. Apply effective speaking and listening skills used in a job interview.</p> <p>B. Apply research skills in searching for a job.</p> <ul style="list-style-type: none"> • CareerLinks • Internet (i.e. O-NET) • Networking • Newspapers • Professional associations • Resource books (that is <i>Occupational Outlook Handbook, PA Career Guide</i>) <p>C. Develop and assemble, for career portfolio placement, career acquisition documents, such as, but not limited to:</p> <ul style="list-style-type: none"> • Job application • Letter of appreciation following an interview • Letter of introduction • Postsecondary education/training applications • Request for letter of recommendation • Resume

<p>D. Identify the importance of developing a plan for the future.</p> <p>E. Discuss the importance of the essential workplace skills, such as, but not limited to:</p> <ul style="list-style-type: none"> • Dependability • Health/safety • Team building • Technology 	<p>D. Identify individualized career portfolio components, such as, but not limited to:</p> <ul style="list-style-type: none"> • Achievements • Awards/recognitions • Career exploration results • Career plans • Community service involvement/projects • Interests/hobbies • Personal career goals • Selected school work • Self inventories <p>E. Apply to daily activities, the essential workplace skills, such as, but not limited to:</p> <ul style="list-style-type: none"> • Commitment • Communication • Dependability • Health/safety • Personal initiative • Scheduling/time management • Team building • Technical literacy • Technology 	<p>D. Develop an individualized career portfolio including components, such as, but not limited to:</p> <ul style="list-style-type: none"> • Achievements • Awards/recognitions • Career exploration results • Career plans • Community service involvement/projects • Interests/hobbies • Personal career goals • Selected school work • Self inventories <p>E. Explain, in the career acquisition process, the importance of the essential workplace skills/knowledge, such as, but not limited to:</p> <ul style="list-style-type: none"> • Commitment • Communication • Dependability • Health/safety • Laws and regulations (that is Americans with Disabilities Act, Child Labor Law, Fair Labor Standards Act, OSHA, Material Safety Data Sheets) • Personal initiative • Self-advocacy • Scheduling/time management • Team building • Technical literacy • Technology 	<p>D. Analyze, revise, and apply an individualized career portfolio to chosen career path.</p> <p>E. Demonstrate, in the career acquisition process, the application of essential workplace skills/knowledge, such as, but not limited to:</p> <ul style="list-style-type: none"> • Commitment • Communication • Dependability • Health/safety • Laws and regulations (that is Americans with Disabilities Act, Child Labor Law, Fair Labor Standards Act, OSHA, Material Safety Data Sheets) • Personal initiative • Self-advocacy • Scheduling/time management • Team building • Technical literacy • Technology
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13.3. Career Retention and Advancement			
13.3.3. GRADE 3	13.3.5. GRADE 5	13.3.8. GRADE 8	13.3.11. GRADE 11
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:</i>			
<p>A. Identify attitudes and work habits that contribute to success at home and school.</p> <p>B. Identify how to cooperate at both home and school.</p> <p>C. Explain effective group interaction terms, such as, but not limited to:</p> <ul style="list-style-type: none"> • Compliment • Cooperate • Encourage • Participate <p>D. Explain how money is used.</p>	<p>A. Explain how student attitudes and work habits transfer from the home and school to the workplace.</p> <p>B. Explain the importance of working cooperatively with others at both home and school to complete a task.</p> <p>C. Identify effective group interaction strategies, such as, but not limited to:</p> <ul style="list-style-type: none"> • Building consensus • Communicating effectively • Establishing ground rules • Listening to others <p>D. Explain budgeting.</p>	<p>A. Determine attitudes and work habits that support career retention and advancement.</p> <p>B. Analyze the role of each participant's contribution in a team setting.</p> <p>C. Explain and demonstrate conflict resolution skills:</p> <ul style="list-style-type: none"> • Constructive criticism • Group dynamics • Managing/leadership • Mediation • Negotiation • Problem solving <p>D. Analyze budgets and pay statements, such as, but not limited to:</p> <ul style="list-style-type: none"> • Charitable contributions • Expenses • Gross pay • Net pay • Other income • Savings • Taxes 	<p>A. Evaluate personal attitudes and work habits that support career retention and advancement.</p> <p>B. Evaluate team member roles to describe and illustrate active listening techniques:</p> <ul style="list-style-type: none"> • Clarifying • Encouraging • Reflecting • Restating • Summarizing <p>C. Evaluate conflict resolution skills as they relate to the workplace:</p> <ul style="list-style-type: none"> • Constructive criticism • Group dynamics • Managing/leadership • Mediation • Negotiation • Problem solving <p>D. Develop a personal budget based on career choice, such as, but not limited to:</p> <ul style="list-style-type: none"> • Charitable contributions • Fixed/variable expenses • Gross pay • Net pay • Other income • Savings • Taxes

<p>E. Discuss how time is used at both home and school.</p> <p>F. Identify the changes in family and friend’s roles at -home, at school and in the community..</p> <p>G. Define and describe the importance of lifelong learning.</p>	<p>E. Develop a personal schedule based on activities and responsibilities at both home and school.</p> <p>F. Describe the impact of role changes at home, school, and at work, and how the role changes impact career advancement and retention</p> <p>G. Describe how personal interests and abilities impact lifelong learning.</p>	<p>E. Identify and apply time management strategies as they relate to both personal and work situations.</p> <p>F. Identify characteristics of the changing workplace including Americans with Disabilities Act accommodations, and explain their impact on jobs and employment.</p> <p>G. Identify formal and informal lifelong learning opportunities that support career retention and advancement.</p>	<p>E. Evaluate time management strategies and their application to both personal and work situations.</p> <p>F. Evaluate strategies for career retention and advancement in response to the changing global workplace.</p> <p>G. Evaluate the impact of lifelong learning on career retention and advancement.</p>
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13.4. Entrepreneurship			
13.4.3. GRADE 3	13.4.5. GRADE 5	13.4.8. GRADE 8	13.4.11. GRADE 11
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:</i>			
<p>A. Define entrepreneurship.</p> <p>B. Describe the character traits of successful entrepreneurs, such as, but not limited to:</p> <ul style="list-style-type: none"> • Adaptability • Creative thinking • Ethical behavior • Leadership • Positive attitude • Risk-taking <p>C. Describe age-appropriate entrepreneurial opportunities, such as, but not limited to:</p> <ul style="list-style-type: none"> • Bake sale • Crafts • Lemonade stand • Pet care 	<p>A. Identify the risks and rewards of entrepreneurship.</p> <p>B. Discuss the entrepreneurial character traits of historical or contemporary entrepreneurs.</p> <p>C. Discuss the steps entrepreneurs take to bring their goods or services to market, such as, but not limited to:</p> <ul style="list-style-type: none"> • Marketing • Production • Research and development • Selection of goods and services 	<p>A. Compare and contrast entrepreneurship to traditional employment, such as, but not limited to:</p> <ul style="list-style-type: none"> • Benefits • Job security • Operating costs • Wages <p>B. Evaluate how entrepreneurial character traits influence career opportunities.</p> <p>C. Identify and describe the basic components of a business plan, such as, but not limited to:</p> <ul style="list-style-type: none"> • Business idea • Competitive analysis • Daily operations • Finances/budget • Marketing • Productive resources (human, capital, natural) • Sales forecasting 	<p>A. Analyze entrepreneurship as it relates to personal career goals and corporate opportunities.</p> <p>B. Analyze entrepreneurship as it relates to personal character traits.</p> <p>C. Develop a business plan for an entrepreneurial concept of personal interest and identify available resources, such as, but not limited to:</p> <ul style="list-style-type: none"> • Community Based Organizations (that is chambers of commerce, trade/technical associations, Industrial Resource Centers) • Financial institutions • School-based career centers

			<ul style="list-style-type: none">• Small Business Administration services (that is SCORE, Small Business Development Centers, Entrepreneurial Development Centers)• Venture capital
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Academic Standards for Career Education and Work

XXXIX. GLOSSARY

Americans with Disabilities Act (Public Law 101-336):	The Americans with Disabilities Act is a federal civil rights law that prohibits discrimination and for ensuring equal opportunity for persons with disabilities in employment, state and local government services, public accommodations, commercial facilities, transportation, and requiring the establishment of tdd/telephone relay services.
Aptitudes:	Capacity to learn and understand.
Associate degree:	A postsecondary degree typically earned within a two-year timeframe.
Baccalaureate degree:	A postsecondary degree, also known as a bachelor’s degree, typically earned within a 4-year timeframe from a college or university.
Benefits:	Something of value that an employee receives in addition to a wage or salary. Examples include health and life insurance, vacation leave, retirement plans, and the like.
Budget:	A financial plan that summarizes anticipated income and expenditures over a period of time.
Business plan:	A prepared document detailing the past, present, and future of an organization.
Career and technical centers:	Schools that educate secondary students and adults through academic instruction, job preparation and acquisition of occupational skills leading to credentials or employment, or both, in specific industries. The centers also provide opportunities for transition to postsecondary education and continuing education.
Career cluster:	A grouping of related occupations, which share similar skill sets.

Career days:	Special events that allow students to meet with employers, career development specialists, community-based organization representatives, and postsecondary educators. Events are designed to encourage students to gain information about careers and job opportunities.
Career plan:	A document developed by the student that identifies a series of educational studies and experiences to prepare them for postsecondary education or work, or both, in a selected career cluster or area.
Career portfolio:	An ongoing, individualized collection of materials (electronic or hard copy) that documents a student's educational performance, career exploration and employment experiences over time. While there is no standard format that a career portfolio must take, it typically includes a range of work, containing assignments by the teacher/counselor and selections by the student. It serves as a guide for the student to transition to postsecondary education or the workplace, or both.
Career retention and advancement:	Career retention is the process of keeping a job. Career advancement is the process of performing the necessary requirements to progress in a career.
CareerLinks:	A cooperative system that provides one-stop delivery of career services to job seekers, employers and other interested individuals.
Certificate/licensure:	A document, issued by associations, employers, educational institutions, government, and the like, confirming that one has fulfilled the requirements and is able to perform to a specified level of proficiency within a career field.
Child Labor Laws:	Legislation governing the employment of children under the age of 18.
Competitive analysis:	A tool that allows a business to identify its competitors and evaluate their respective strengths and weaknesses.
Cooperative education:	A structured method of instruction whereby students alternate or coordinate their high school studies with a job in a field related to their academic or career objectives.

Entrepreneurs:	Individuals who engage in the process of organizing, managing, and assuming the risk of a business or enterprise.
Entrepreneurship:	The process of organizing, managing, and assuming the risks of a business or enterprise.
Fair Labor Standards Act:	A federal law that defines overtime and wage requirements (26 U.S.C.A. §§ 201—219).
Fixed/variable expenses:	Fixed expenses are regular in their timing and amount, and include such things as rent, mortgage, car payment, and insurance. Variable expenses are irregular in their timing and amount, and include such things as food, clothing, home and car maintenance, entertainment, and gifts.
Global influences:	Political and cultural changes, which impact the world and its economy.
Gross pay:	The amount earned before deductions, such as taxes, insurance, and retirement/pension plan.
Industrial Resource Centers:	Non-profit corporations, which provide assistance to improve the competitive position of small-to-medium sized manufacturers.
Internship:	A work experience with an employer for a specified period of time to learn about a particular industry or occupation, which may or may not include financial compensation. The workplace activities may include special projects, a sample of tasks from different jobs, or tasks from a single occupation.
Job shadowing:	Typically as part of career exploration activities in late middle and early high school, a student follows an employee for one or more days to learn about a particular occupation or industry. Job shadowing is intended to help students explore a range of career objectives and to possibly select a career pathway.
Labor supply:	The number of persons either working or unemployed and actively seeking work.
Marketing:	The process or technique of promoting, selling, and distributing a product or service.

Material Safety Data Sheets:	Federally mandated listings of all hazardous materials that will impact the health and safety of the workers and that are required to be posted in the workplace.
Mediation:	Third-party intervention between conflicting parties to promote reconciliation, settlement, or compromise.
Net pay:	The amount remaining after deductions, such as taxes, insurance, and retirement/pension plan.
Networking:	The act of exchanging information, contacts, and services.
Non-traditional careers:	Fields of work for which individuals from one gender comprise less than 25% of the individuals employed in each such occupation or field of work.
O*NET:	Occupational Information Network-- is a free public access online web-based system provided by the US Department of Labor, which includes comprehensive up-to-date occupational information including skills, knowledge, abilities and tasks for more than 950 occupations.
Operating costs:	The funds necessary to operate a business, not including the cost of goods sold. This is also referred to as overhead.
OSHA:	The Occupational Safety and Health Administration--A national agency with representatives in each state who monitor health and safety issues in the workplace.
Professional associations:	Organizations of people having common interests.
Professional degree:	A title conferred on students by a college, university or professional school upon completion of a program of study.
Registered apprenticeship:	A formal program registered with the United States Department of Labor's Bureau of Apprenticeship and Training and with the Pennsylvania Apprenticeship Council. This program must follow strict guidelines as to the types of training and amount of training time an apprentice receives and leads directly into occupations requiring such training for entry.

Resume:	A summary of one's personal qualifications, education/training and employment experience.
Salaries/benefits:	Financial compensation paid regularly for services (See "benefits" for definition).
Sales forecasting:	Predicting the number of services or units likely to be sold over a specified period of time.
School-based career centers:	Specialized areas in schools equipped with resources and materials used to research postsecondary and occupational opportunities.
School-based enterprise:	The production of goods or services as part of a school program.
SCORE:	Service Corps of Retired Executives--A Small Business Administration Federally-sponsored program to assist small-to-medium sized companies.
Self inventories:	Evaluations of an individual's strengths, weaknesses, and interests, as it relates to career planning.
Tech Prep:	The name given to programs that offer at least 4 years of sequential course work at the secondary and postsecondary levels to prepare students for technical careers. The curricula are designed to build student competency in academic subjects, as well as to provide broad technical preparation in a career area.
Technical literacy:	The ability of individuals to use existing and emerging technologies, equipment, language, materials, and manuals to participate intelligently in performing tasks related to everyday life, school or job.
Time management strategies:	Scheduling techniques used to effectively and efficiently direct or control activities.
Traditional careers:	Fields of work for which individuals from one gender comprise more than 25% of the individuals employed in each such occupation or field of work.

Unemployment:	Measurement of the number of people who are not working and who are actively seeking work.
Venture capital:	Public or private funds invested in a potentially profitable business enterprise despite risk of loss.
Vocational rehabilitation centers:	Educational facilities that provide life skills and occupational training services for individuals with special needs.
Wages:	Payments of money for labor or services according to contract and on an hourly, daily, or piecework basis.
Web-based training:	Instruction that is available online.
Work habits:	Acquired behaviors that individuals regularly perform in completing tasks related to chores, school or job.
Working conditions:	The environment in which an individual is employed.



Central Pennsylvania Workforce Development Corporation

Who They Are: The Workforce Investment Act of 1998 and now the Workforce Innovation and Opportunities Act of 2014 (WIOA) provides federal funding for workforce development nationwide. Under WIOA, Pennsylvania's Governor designates local workforce development areas, each of which has a Workforce Development Board (WDB) that oversees the public workforce system.



Highlights of the CPWDC webpage: <http://www.cpwdc.org>

1. Top Jobs
2. Top Employees
3. PA CareerLink® Youth Services
4. Regional Demographic Profiles
5. Central PA Workforce High Priority Occupations (HPOs)

Who are the **top 3 employers** in your county?

- 1.
- 2.
- 3.

List **two** high priority occupations in our region that require skill sets associated with your primary content area?

- 1.
- 2.



Available to all students, this 10 part series is geared to sophomores and is designed to help them make informed post-graduation plans. Making a career decision is difficult, especially without the right information. Each of the PA CareerLink® Academy sessions is designed to help answer common questions students have when planning for their futures and will help students:

- Understand their marketable skills and abilities
- Learn about career opportunities in central Pennsylvania
- Get started on a pathway to a rewarding career

1. Success in the New Economy/Introduction to PA CareerLink®

Students will explore local jobs which are in demand and learn about the level(s) of education and training needed to be successful in them. One take away from the session will be an understanding of how the economy will continue to change and grow.

Services of the PA CareerLink® will be presented along with how students (and their families) might benefit from utilizing available resources which are designed to help all job seekers reach their full potential and be prepared to meet employer expectations.

Answers: What jobs are in demand locally? What skills do I need to succeed in them? How can PA CareerLink® help?

2. Skill and Interest Inventory

Students will learn about their skills and interests and how they can align them with developing career goals.

Answers: How do my skills & interests align with my career goals?

3. Career Pathways/My Career Pathway 101

People often take many different pathways to reach their career goals. Students will learn about career mapping where they will explore the best pathways toward their future careers. The relevancy of high school courses will be reinforced as students learn which courses of study will help them enter a career. They will understand wages that might be earned when they start out, mid-career, and when they reach expert level. Students will also learn how careers in the military might benefit their personal and professional development and understand how skills they acquire in the military can transfer to civilian jobs when the time comes.

Answers: What are the different pathways I can take to meet my career goals? Which high school courses should I take? What can the military offer?

4. Labor Market Information/Career Clusters

Students will be given an awareness of career opportunities in local industries that pay family-sustaining wages and learn how to best prepare to meet employer expectations. Students will see the benefit of completing high school and know there is a future for them.

Answers: What career opportunities pay enough? What are the benefits of completing high school?

5. What Employers Want (Soft Skills Matter)

Soft skills are the building blocks of professionalism, and students will learn what they are and why they are so important to employers. Students will specifically learn ways to identify their own soft skills and convey them on an application, resume, and in an interview so they stand out from the crowd.

Answers: What are soft skills and why they are so important to employers? How can I identify and strengthen my own?

6. Resume Builders

Students will learn why having a high quality resume is essential and then will discuss what to include in a resume and why. They will view examples of resume templates.

Answers: Why is a high quality resume important? What should I include in mine?

7. Interviewing Techniques

Doing well in an interview requires preparation and practice so students will learn how to prepare and what to expect. They will explore examples of questions employers often ask and think through how to best answer them. They will learn what employers are looking for in job candidates, so they are prepared to make themselves stand out.

Answers: What questions do employers often ask in interviews? How can I stand out when I interview?

8. Financial Literacy Basics

Designed to help students think responsibly about managing money, this session will include a discussion of basics such as how to read a paystub, what is taken out of a paycheck and why, and paying themselves first. The session may include a budgeting worksheet to complete as a group project, if time allows.

Answers: What is the responsible way to manage money? How do I create a budget?

9. Entrepreneurial Skills

This session is focused on helping students build on an entrepreneurial spirit or identify an interest in someday owning their own businesses. Students will learn about skills necessary for success as an entrepreneur, understand available resources, as well as consider how they might get started.

Answers: What skills are necessary to be an entrepreneur? What resources are available to help me start a business?

10. Employer Panel

Facilitated as a large group assembly or in a classroom setting, PA CareerLink® staff will assist you in organizing local, relevant company representatives to speak with students about specific industries or careers. Panel discussions will be tailored to best meet your expectations for each group.

Answers: What advice do companies I'm interested in have for me?

PA CareerLink® Academy staff will work around tight school schedules. Sessions can be offered to groups small or large and can be customized per school request.

To learn more, contact the Bridges to the Future staff in your school, or Kristen Liberati, kliberati@censop.com

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*Auxiliary aids and services are available upon request to individuals with disabilities.
Equal Opportunity Employer.*

2018 High Priority Occupations for Central Workforce Development Area

SOC Code	SOC Title	Educational Attainment	Wages (2017)			Employment			
			Entry Level	Annual Average	Exper. Level	Estimated 2014	Projected 2024	Percent Change	Annual Openings
11-1021	General & Operations Managers	BD+	\$52,210	\$111,330	\$140,880	2,460	2,600	5.7%	76
11-3031	Financial Managers	BD+	\$75,060	\$137,060	\$168,050	530	570	7.5%	17
11-9051	Food Service Managers	WK EXP	\$36,080	\$55,710	\$65,520	660	680	3.0%	15
13-1071	Human Resources Specialists	BD	\$40,620	\$56,490	\$64,420	690	720	4.3%	20
13-1161	Market Research Analysts & Marketing Specialists	BD	\$34,460	\$58,200	\$70,070	690	800	15.9%	19
13-2011	Accountants & Auditors	BD	\$41,700	\$63,850	\$74,920	1,740	1,890	8.6%	61
15-1151	Computer User Support Specialists	PS	\$34,320	\$50,850	\$59,110	930	990	6.5%	18
17-2051	Civil Engineers	BD	\$57,670	\$78,360	\$88,710	440	470	6.8%	16
17-3024	Electro-Mechanical Technicians	AD	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17-3026	Industrial Engineering Technicians	AD	\$39,800	\$48,580	\$52,970	110	110	0.0%	3
21-1021	Child, Family & School Social Workers	BD	\$25,900	\$42,510	\$50,810	690	730	5.8%	21
21-1093	Social & Human Service Assistants	ST OJT	\$24,470	\$34,130	\$38,960	1,540	1,670	8.4%	43
25-3021	Self-Enrichment Education Teachers	WK EXP	\$24,080	\$38,460	\$45,650	630	700	11.1%	19
27-2022	Coaches & Scouts	BD	\$17,590	\$39,250	\$50,070	690	680	-1.4%	23
29-1141	Registered Nurses	BD	\$45,870	\$61,810	\$69,770	6,340	7,380	16.4%	254
29-2041	Emergency Medical Technicians & Paramedics	PS	\$20,190	\$29,910	\$34,770	570	680	19.3%	20
29-2061	Licensed Practical & Licensed Vocational Nurses	PS	\$33,410	\$41,950	\$46,220	2,420	2,690	11.2%	96
29-2071	Medical Records & Health Information Technicians	PS	\$27,030	\$38,970	\$44,940	410	460	12.2%	14
31-1014	Nursing Assistants	PS	\$23,090	\$28,630	\$31,400	3,750	4,110	9.6%	121
31-9091	Dental Assistants	PS	\$28,360	\$36,280	\$40,240	480	510	6.3%	15
33-3012	Correctional Officers & Jailers	MT OJT	\$37,810	\$51,820	\$58,830	1,480	1,470	-0.7%	41
35-1012	Supervisors - Food Preparation & Serving Workers	WK EXP	\$21,940	\$35,200	\$41,830	1,640	1,780	8.5%	62
41-3021	Insurance Sales Agents	MT OJT	\$29,520	\$58,790	\$73,430	690	730	5.8%	22
43-1011	Supervisors - Office & Administrative Support Workers	WK EXP	\$38,580	\$54,920	\$63,090	1,960	2,050	4.6%	39
43-3031	Bookkeeping, Accounting & Auditing Clerks	PS+	\$23,110	\$33,860	\$39,230	3,410	3,190	-6.5%	33
43-4111	Interviewers	ST OJT	\$27,450	\$37,760	\$42,910	560	590	5.4%	16
43-5061	Production, Planning & Expediting Clerks	MT OJT	\$32,340	\$46,550	\$53,660	520	550	5.8%	17
43-5071	Shipping, Receiving & Traffic Clerks	ST OJT	\$24,480	\$34,430	\$39,410	1,250	1,210	-3.2%	27
43-6011	Executive Secretaries & Executive Administrative Assistants	WK EXP	\$40,380	\$61,350	\$71,830	1,290	1,190	-7.8%	14
43-6014	Secretaries	ST OJT	\$22,790	\$32,790	\$37,780	5,690	5,710	0.4%	62
45-2091	Agricultural Equipment Operators	MT OJT	N/A	N/A	N/A	350	400	14.3%	14
45-2093	Farmworkers, Farm, Ranch & Aquacultural Animals	ST OJT	\$19,450	\$27,810	\$31,990	760	750	-1.3%	20
47-1011	Supervisors - Construction Trades & Extraction Workers	WK EXP	\$41,120	\$59,870	\$69,240	1,000	1,070	7.0%	15
47-2031	Carpenters	LT OJT	\$30,530	\$42,800	\$48,940	2,790	3,000	7.5%	53
47-2073	Operating Engineers & Other Construction Equipment Operators	MT OJT	\$31,800	\$43,870	\$49,910	1,290	1,380	7.0%	31
47-2111	Electricians	LT OJT	\$31,740	\$45,870	\$52,930	1,010	1,070	5.9%	21

2018 High Priority Occupations for Central Workforce Development Area

SOC Code	SOC Title	Educational Attainment	Wages (2017)			Employment			
			Entry Level	Annual Average	Exper. Level	Estimated 2014	Projected 2024	Percent Change	Annual Openings
47-4051	Highway Maintenance Workers	MT OJT	\$23,820	\$34,460	\$39,780	590	580	-1.7%	16
49-1011	Supervisors - Mechanics, Installers & Repairers	WK EXP	\$45,280	\$65,970	\$76,320	830	860	3.6%	20
49-3023	Automotive Service Technicians & Mechanics	PS	\$25,360	\$35,880	\$41,140	1,680	1,750	4.2%	52
49-3031	Bus & Truck Mechanics & Diesel Engine Specialists	LT OJT	\$29,000	\$42,130	\$48,700	770	870	13.0%	23
49-9041	Industrial Machinery Mechanics	LT OJT	\$33,760	\$45,380	\$51,180	950	1,140	20.0%	44
49-9043	Maintenance Workers, Machinery	LT OJT	\$34,460	\$43,180	\$47,540	310	330	6.5%	7
49-9051	Electrical Power-Line Installers & Repairers	LT OJT	\$51,200	\$78,390	\$91,990	250	340	36.0%	20
49-9071	Maintenance & Repair Workers, General	MT OJT	\$25,130	\$36,920	\$42,810	4,100	4,310	5.1%	129
51-1011	Supervisors - Production & Operating Workers	WK EXP	\$38,490	\$56,090	\$64,890	1,570	1,560	-0.6%	25
51-2092	Team Assemblers	MT OJT	N/A	N/A	N/A	2,900	2,870	-1.0%	62
51-4011	Computer-Controlled Machine Tool Operators, Metal & Plastic	MT OJT	\$26,440	\$36,610	\$41,700	360	420	16.7%	17
51-4041	Machinists	LT OJT	\$30,980	\$44,840	\$51,770	870	960	10.3%	34
51-4121	Welders, Cutters, Solderers & Brazers	MT OJT	\$29,270	\$40,480	\$46,090	1,150	1,240	7.8%	43
51-9061	Inspectors, Testers, Sorters, Samplers & Weighers	MT OJT	\$28,390	\$39,760	\$45,450	1,120	1,110	-0.9%	28
51-9111	Packaging & Filling Machine Operators & Tenders	MT OJT	\$24,060	\$36,240	\$42,330	910	920	1.1%	33
53-1031	Supervisors - Transportation & Vehicle Operators	WK EXP	N/A	N/A	N/A	410	440	7.3%	16
53-3032	Heavy & Tractor-Trailer Truck Drivers	PS	\$32,050	\$46,310	\$53,440	5,240	5,830	11.3%	148
53-7051	Industrial Truck & Tractor Operators	ST OJT	\$27,850	\$36,900	\$41,430	1,030	1,060	2.9%	28

Educational Attainment Abbreviations:

- Short-term or Moderate-term training (**ST OJT** or **MT OJT**) – basic tasks and skills are learned through a period of on-the-job training. A high school diploma may be required.
- Long-term training (**LT OJT**) – a high school diploma and at least one year of on-the-job training or an apprenticeship.
- Related work experience (**WK EXP**) – a high school diploma and training gained through hands-on work in a similar occupation.
- Postsecondary training (**PS** or **PS+**) – training is gained through a postsecondary training program. Some period of related work experience may be required.
- Associate Degree (**AD** or **AD+**) – degree completed after two years of full-time schooling beyond high school. Some period of related work experience may be required.
- Bachelor's Degree (**BD** or **BD+**) – degree completed after four years of full-time schooling beyond high school. Some period of related work experience may be required.
- Master's Degree (**MD** or **MD+**) – degree completed after two years of full-time schooling beyond a bachelor's degree. Some period of related work experience may be required.
- Doctoral (**PhD**) or First Professional Degree (**PROF**) – degree programs requiring 3-6 years of education at the college or university level beyond a four-year bachelor's degree.

2018 Pennsylvania In-Demand Occupations List

Jobs of...	SOC Code	SOC Title	Educational Attainment	Employment			Annual Openings	Wages (2017)		
				Estimated 2014	Projected 2024	Percent Change		Entry Level	Annual Average	Exper. Level
Today	45-2091	Agricultural Equipment Operators	ST OJT	2,600	2,970	14.2%	106	\$26,790	\$39,120	\$45,290
Today	53-3011	Ambulance Drivers & Attendants	MT OJT	1,460	1,700	16.4%	49	\$20,660	\$23,920	\$25,550
Today	39-2011	Animal Trainers	MT OJT	1,140	1,250	9.6%	52	\$20,520	\$32,680	\$38,760
Today	43-3011	Bill & Account Collectors	MT OJT	12,350	11,970	-3.1%	302	\$26,200	\$37,250	\$42,770
Today	43-3021	Billing & Posting Clerks	MT OJT	27,130	29,460	8.6%	800	\$27,660	\$37,720	\$42,750
Today	53-3022	Bus Drivers, School or Special Client	ST OJT	28,160	30,120	7.0%	566	\$19,340	\$28,420	\$32,950
Today	51-7011	Cabinetmakers & Bench Carpenters	MT OJT	5,010	5,010	0.0%	41	\$27,610	\$39,210	\$45,010
Today	43-5011	Cargo & Freight Agents	ST OJT	3,200	3,520	10.0%	136	\$33,400	\$49,080	\$56,910
Today	41-2011	Cashiers	ST OJT	147,700	146,970	-0.5%	6,284	\$17,200	\$20,310	\$21,860
Today	47-2051	Cement Masons & Concrete Finishers	MT OJT	5,380	6,210	15.4%	148	\$31,580	\$45,280	\$52,120
Today	39-9011	Childcare Workers	ST OJT	48,120	50,370	4.7%	1,646	\$17,370	\$21,940	\$24,220
Today	35-3021	Combined Food Preparation & Serving Workers	ST OJT	134,410	150,800	12.2%	5,983	\$17,420	\$19,900	\$21,140
Today	51-4011	Computer-Controlled Machine Tool Operators, Metal & Plastic	MT OJT	8,550	10,310	20.6%	435	\$27,100	\$38,480	\$44,180
Today	35-2012	Cooks, Institution & Cafeteria	ST OJT	18,870	20,100	6.5%	622	\$20,430	\$28,180	\$32,060
Today	33-3012	Correctional Officers & Jailers	MT OJT	16,630	16,760	0.8%	470	\$36,930	\$51,140	\$58,240
Today	41-2021	Counter & Rental Clerks	ST OJT	14,840	15,510	4.5%	434	\$18,040	\$27,040	\$31,540
Today	35-3022	Counter Attendants, Cafeteria, Food Concession & Coffee Shop	ST OJT	11,780	12,390	5.2%	770	\$17,360	\$20,350	\$21,850
Today	43-4051	Customer Service Representatives	ST OJT	108,520	114,820	5.8%	3,302	\$24,160	\$36,180	\$42,190
Today	35-9011	Dining Room & Cafeteria Attendants & Bartender Helpers	ST OJT	15,230	16,440	7.9%	882	\$17,310	\$20,070	\$21,460
Today	35-9021	Dishwashers	ST OJT	21,910	21,630	-1.3%	947	\$17,420	\$20,280	\$21,700
Today	53-3031	Driver/Sales Workers	ST OJT	19,460	20,400	4.8%	425	\$17,380	\$27,270	\$32,220
Today	47-2081	Drywall & Ceiling Tile Installers	MT OJT	2,040	2,260	10.8%	34	\$34,460	\$48,720	\$55,850
Today	47-5021	Earth Drillers	MT OJT	1,180	1,320	11.9%	41	\$33,630	\$44,610	\$50,100
Today	45-2092	Farmworkers & Laborers, Crop, Nursery & Greenhouse	ST OJT	30,140	29,770	-1.2%	802	\$17,760	\$27,080	\$31,730
Today	45-2093	Farmworkers, Farm, Ranch & Aquacultural Animals	ST OJT	5,320	5,260	-1.1%	142	\$18,010	\$27,000	\$31,500
Today	39-9031	Fitness Trainers & Aerobics Instructors	ST OJT	12,650	13,850	9.5%	353	\$20,710	\$37,920	\$46,530
Today	35-2021	Food Preparation Workers	ST OJT	35,800	37,680	5.3%	1,185	\$17,560	\$22,690	\$25,250
Today	35-3041	Food Servers, Nonrestaurant	ST OJT	13,430	15,180	13.0%	504	\$17,520	\$22,950	\$25,670
Today	51-7021	Furniture Finishers	ST OJT	1,160	1,130	-2.6%	20	\$23,230	\$34,450	\$40,060
Today	47-3011	Helpers--Brick, Block & Stonemasons & Tile & Marble Setters	ST OJT	950	1,180	24.2%	36	\$25,460	\$36,310	\$41,740
Today	47-3012	Helpers--Carpenters	ST OJT	970	1,110	14.4%	26	\$23,190	\$34,050	\$39,470
Today	47-3013	Helpers--Electricians	ST OJT	1,490	1,750	17.4%	45	\$24,130	\$31,390	\$35,010
Today	47-3015	Helpers--Pipelayers, Plumbers, Pipefitters & Steamfitters	ST OJT	1,160	1,300	12.1%	28	\$22,940	\$32,560	\$37,380
Today	51-9198	Helpers--Production Workers	ST OJT	23,200	23,010	-0.8%	757	\$20,540	\$29,820	\$34,470
Today	47-4051	Highway Maintenance Workers	MT OJT	11,430	11,490	0.5%	311	\$28,310	\$41,830	\$48,600
Today	31-1011	Home Health Aides	ST OJT	57,620	72,840	26.4%	2,824	\$20,360	\$25,170	\$27,580
Today	35-9031	Hosts & Hostesses: Restaurant, Lounge & Coffee Shop	ST OJT	14,850	15,860	6.8%	1,155	\$17,400	\$20,970	\$22,760
Today	43-4081	Hotel, Motel & Resort Desk Clerks	ST OJT	8,260	9,320	12.8%	533	\$17,300	\$22,150	\$24,580
Today	53-7051	Industrial Truck & Tractor Operators	ST OJT	27,970	29,790	6.5%	878	\$27,830	\$37,780	\$42,760
Today	51-9061	Inspectors, Testers, Sorters, Samplers & Weighers	MT OJT	20,130	20,650	2.6%	558	\$26,620	\$41,050	\$48,270

2018 Pennsylvania In-Demand Occupations List

Jobs of...	SOC Code	SOC Title	Educational Attainment	Employment			Annual Openings	Wages (2017)		
				Estimated 2014	Projected 2024	Percent Change		Entry Level	Annual Average	Exper. Level
Today	43-9041	Insurance Claims & Policy Processing Clerks	MT OJT	12,370	12,580	1.7%	331	\$32,130	\$41,670	\$46,440
Today	41-3021	Insurance Sales Agents	MT OJT	20,020	21,300	6.4%	654	\$34,340	\$82,790	\$107,010
Today	37-3011	Landscaping & Groundskeeping Workers	ST OJT	44,700	47,440	6.1%	1,080	\$20,840	\$29,400	\$33,680
Today	53-3033	Light Truck or Delivery Services Drivers	ST OJT	38,350	39,580	3.2%	775	\$18,670	\$33,430	\$40,820
Today	49-9043	Maintenance Workers, Machinery	MT OJT	4,680	5,210	11.3%	128	\$35,210	\$47,760	\$54,040
Today	31-9093	Medical Equipment Preparers	MT OJT	1,920	2,150	12.0%	63	\$27,470	\$35,740	\$39,870
Today	43-6013	Medical Secretaries	MT OJT	21,950	24,810	13.0%	517	\$26,460	\$34,920	\$39,150
Today	43-9061	Office Clerks, General	ST OJT	131,500	133,850	1.8%	3,071	\$22,020	\$33,880	\$39,810
Today	47-2073	Operating Engineers & Other Construction Equipment Operators	MT OJT	20,910	23,070	10.3%	565	\$34,270	\$50,340	\$58,370
Today	43-4151	Order Clerks	ST OJT	10,000	9,610	-3.9%	271	\$22,390	\$32,750	\$37,930
Today	51-9111	Packaging & Filling Machine Operators & Tenders	MT OJT	16,110	16,590	3.0%	622	\$23,160	\$33,800	\$39,120
Today	47-2141	Painters, Construction & Maintenance	MT OJT	8,980	9,900	10.2%	235	\$27,740	\$42,230	\$49,470
Today	41-2022	Parts Salespersons	MT OJT	9,800	10,400	6.1%	277	\$21,520	\$32,870	\$38,540
Today	47-2071	Paving, Surfacing & Tamping Equipment Operators	MT OJT	2,380	2,700	13.4%	89	\$32,250	\$44,070	\$49,970
Today	39-9021	Personal Care Aides	ST OJT	62,170	75,310	21.1%	1,818	\$20,240	\$23,940	\$25,790
Today	31-2022	Physical Therapist Aides	ST OJT	2,250	2,880	28.0%	127	\$20,800	\$26,860	\$29,890
Today	47-2151	Pipelayers	ST OJT	1,800	2,020	12.2%	46	\$39,400	\$55,370	\$63,360
Today	43-5052	Postal Service Mail Carriers	ST OJT	13,260	9,800	-26.1%	256	\$35,660	\$49,930	\$57,070
Today	43-5061	Production, Planning & Expediting Clerks	MT OJT	13,860	14,510	4.7%	441	\$32,150	\$47,180	\$54,690
Today	43-4171	Receptionists & Information Clerks	ST OJT	42,860	45,010	5.0%	1,370	\$20,250	\$28,110	\$32,040
Today	41-2031	Retail Salespersons	ST OJT	195,950	202,340	3.3%	7,431	\$17,400	\$27,010	\$31,820
Today	47-2181	Roofers	MT OJT	4,750	5,320	12.0%	129	\$30,310	\$42,320	\$48,330
Today	41-4012	Sales Representatives	MT OJT	70,970	73,680	3.8%	1,731	\$36,250	\$71,890	\$89,710
Today	51-7041	Sawing Machine Setters, Operators & Tenders, Wood	ST OJT	1,830	1,870	2.2%	56	\$24,530	\$32,110	\$35,900
Today	43-6014	Secretaries	ST OJT	113,770	115,080	1.2%	1,330	\$24,130	\$35,290	\$40,870
Today	49-2098	Security & Fire Alarm Systems Installers	MT OJT	3,090	3,570	15.5%	124	\$33,280	\$49,630	\$57,800
Today	33-9032	Security Guards	ST OJT	43,860	47,260	7.8%	957	\$19,890	\$27,150	\$30,770
Today	47-4071	Septic Tank Servicers & Sewer Pipe Cleaners	MT OJT	1,230	1,410	14.6%	48	\$32,180	\$43,330	\$48,900
Today	39-5093	Shampooers	ST OJT	900	1,000	11.1%	17	\$17,370	\$19,450	\$20,480
Today	43-5071	Shipping, Receiving & Traffic Clerks	ST OJT	26,230	25,770	-1.8%	570	\$24,400	\$35,060	\$40,390
Today	21-1093	Social & Human Service Assistants	ST OJT	23,790	27,030	13.6%	790	\$25,240	\$34,420	\$39,010
Today	43-5081	Stock Clerks & Order Fillers	ST OJT	79,260	81,320	2.6%	2,722	\$18,150	\$25,290	\$28,860
Today	53-3041	Taxi Drivers & Chauffeurs	ST OJT	9,980	11,220	12.4%	313	\$18,730	\$25,530	\$28,940
Today	51-2092	Team Assemblers	MT OJT	36,670	37,900	3.4%	911	N/A	N/A	N/A
Today	43-3071	Tellers	ST OJT	24,930	21,590	-13.4%	975	\$22,250	\$28,050	\$30,960
Today	31-9096	Veterinary Assistants & Laboratory Animal Caretakers	ST OJT	2,540	2,770	9.1%	76	\$20,760	\$26,910	\$29,990
Today	35-3031	Waiters & Waitresses	ST OJT	98,340	103,090	4.8%	5,208	\$17,420	\$23,080	\$25,910
Today	51-4121	Welders, Cutters, Solderers & Brazers	MT OJT	18,820	19,930	5.9%	652	\$31,870	\$42,910	\$48,440
Today	51-7042	Woodworking Machine Setters, Operators & Tenders	ST OJT	3,500	3,550	1.4%	65	\$23,090	\$31,590	\$35,850

2018 Pennsylvania In-Demand Occupations List

Jobs of...	SOC Code	SOC Title	Educational Attainment	Employment			Annual Openings	Wages (2017)		
				Estimated 2014	Projected 2024	Percent Change		Entry Level	Annual Average	Exper. Level
Tomorrow	27-4011	Audio & Video Equipment Technicians	PS	2,290	2,570	12.2%	72	\$27,610	\$43,260	\$51,090
Tomorrow	49-3023	Automotive Service Technicians & Mechanics	PS	38,370	39,650	3.3%	1,156	\$24,650	\$39,510	\$46,930
Tomorrow	43-3031	Bookkeeping, Accounting & Auditing Clerks	PS+	71,160	66,880	-6.0%	698	\$27,290	\$39,470	\$45,560
Tomorrow	47-2021	Brickmasons & Blockmasons	LT OJT	3,680	4,350	18.2%	99	\$35,290	\$53,850	\$63,120
Tomorrow	49-3031	Bus & Truck Mechanics & Diesel Engine Specialists	LT OJT	12,910	14,630	13.3%	395	\$31,870	\$44,680	\$51,080
Tomorrow	29-2031	Cardiovascular Technologists & Technicians	AD	2,950	3,540	20.0%	116	\$33,900	\$56,970	\$68,510
Tomorrow	47-2031	Carpenters	LT OJT	48,880	53,760	10.0%	1,051	\$31,110	\$50,770	\$60,600
Tomorrow	35-1011	Chefs & Head Cooks	WK EXP	5,060	5,590	10.5%	129	\$36,110	\$54,110	\$63,110
Tomorrow	13-1031	Claims Adjusters, Examiners & Investigators	LT OJT	14,130	14,480	2.5%	384	\$42,610	\$65,090	\$76,330
Tomorrow	51-4012	CNC Machine Tool Programmers, Metal & Plastic	LT OJT	930	1,120	20.4%	47	\$40,080	\$53,470	\$60,160
Tomorrow	15-1151	Computer User Support Specialists	PS	25,460	28,460	11.8%	629	\$33,460	\$50,990	\$59,750
Tomorrow	35-2014	Cooks, Restaurant	WK EXP	35,460	41,170	16.1%	1,509	\$18,390	\$25,540	\$29,120
Tomorrow	53-7021	Crane & Tower Operators	WK EXP	2,000	2,180	9.0%	87	\$32,710	\$54,670	\$65,640
Tomorrow	31-9091	Dental Assistants	PS	12,590	13,560	7.7%	408	\$27,590	\$37,870	\$43,010
Tomorrow	29-2051	Dietetic Technicians	AD	1,170	1,330	13.7%	27	\$21,270	\$31,280	\$36,280
Tomorrow	49-9051	Electrical Power-Line Installers & Repairers	LT OJT	3,880	4,680	20.6%	234	\$57,510	\$77,350	\$87,280
Tomorrow	47-2111	Electricians	LT OJT	23,370	26,610	13.9%	681	\$38,680	\$62,070	\$73,770
Tomorrow	29-2041	Emergency Medical Technicians & Paramedics	PS	13,260	15,260	15.1%	418	\$22,920	\$33,200	\$38,330
Tomorrow	19-4091	Environmental Science & Protection Technicians	AD	1,810	2,020	11.6%	97	\$30,670	\$45,430	\$52,810
Tomorrow	43-6011	Executive Secretaries & Executive Administrative Assistants	WK EXP	24,490	22,930	-6.4%	258	\$39,670	\$58,560	\$68,000
Tomorrow	11-9013	Farmers, Ranchers & Other Agricultural Managers	WK EXP	32,110	31,040	-3.3%	547	\$64,390	\$89,780	\$102,470
Tomorrow	39-5012	Hairdressers, Hairstylists & Cosmetologists	PS	41,390	45,540	10.0%	1,480	\$17,360	\$26,570	\$31,180
Tomorrow	49-9021	Heating, A/C & Refrigeration Mechanics & Installers	PS+	13,340	14,860	11.4%	356	\$33,890	\$51,360	\$60,090
Tomorrow	53-3032	Heavy & Tractor-Trailer Truck Drivers	PS	79,390	89,240	12.4%	2,335	\$32,560	\$46,150	\$52,950
Tomorrow	49-9041	Industrial Machinery Mechanics	LT OJT	15,790	19,230	21.8%	754	\$36,530	\$50,600	\$57,630
Tomorrow	29-2061	Licensed Practical & Licensed Vocational Nurses	PS	38,150	41,680	9.3%	1,440	\$36,900	\$47,070	\$52,150
Tomorrow	51-4041	Machinists	LT OJT	19,830	22,230	12.1%	813	\$30,700	\$43,380	\$49,720
Tomorrow	49-9071	Maintenance & Repair Workers, General	LT OJT	64,440	68,190	5.8%	2,064	\$25,250	\$39,350	\$46,390
Tomorrow	29-2012	Medical & Clinical Laboratory Technicians	AD	9,680	10,850	12.1%	348	N/A	N/A	N/A
Tomorrow	29-2071	Medical Records & Health Information Technicians	PS	8,060	9,050	12.3%	280	\$28,140	\$39,700	\$45,480
Tomorrow	49-9044	Millwrights	LT OJT	1,320	1,590	20.5%	54	\$38,160	\$54,430	\$62,570
Tomorrow	49-3052	Motorcycle Mechanics	PS	970	1,060	9.3%	29	\$23,590	\$35,930	\$42,100
Tomorrow	31-1014	Nursing Assistants	PS	79,130	88,350	11.7%	2,708	\$24,310	\$30,010	\$32,860
Tomorrow	31-2011	Occupational Therapy Assistants	AD	2,520	3,360	33.3%	157	\$37,700	\$50,780	\$57,320
Tomorrow	29-2057	Ophthalmic Medical Technicians	PS	1,130	1,260	11.5%	25	\$28,870	\$37,350	\$41,590
Tomorrow	29-2081	Opticians, Dispensing	LT OJT	3,190	3,640	14.1%	131	\$26,050	\$37,660	\$43,460
Tomorrow	23-2011	Paralegals & Legal Assistants	AD	9,880	10,770	9.0%	306	\$34,280	\$54,080	\$63,970
Tomorrow	31-2021	Physical Therapist Assistants	AD	4,720	6,100	29.2%	275	\$38,520	\$52,100	\$58,900
Tomorrow	47-2152	Plumbers, Pipefitters & Steamfitters	LT OJT	16,950	18,670	10.1%	396	\$35,940	\$56,980	\$67,490
Tomorrow	25-2011	Preschool Teachers	AD	15,990	17,130	7.1%	581	\$20,660	\$28,650	\$32,650

2018 Pennsylvania In-Demand Occupations List

Jobs of...	SOC Code	SOC Title	Educational Attainment	Employment			Annual Openings	Wages (2017)		
				Estimated 2014	Projected 2024	Percent Change		Entry Level	Annual Average	Exper. Level
Tomorrow	29-1126	Respiratory Therapists	AD	5,270	5,900	12.0%	187	\$45,430	\$59,200	\$66,080
Tomorrow	25-3021	Self-Enrichment Education Teachers	WK EXP	13,490	15,240	13.0%	429	\$20,490	\$38,240	\$47,110
Tomorrow	47-1011	Supervisors - Construction Trades & Extraction Workers	WK EXP	21,180	23,410	10.5%	391	\$48,350	\$72,170	\$84,080
Tomorrow	45-1011	Supervisors - Farm & Forestry Workers	WK EXP	2,380	2,220	-6.7%	58	\$38,940	\$55,110	\$63,190
Tomorrow	35-1012	Supervisors - Food Preparation & Serving Workers	WK EXP	30,420	33,760	11.0%	1,239	\$22,660	\$37,380	\$44,740
Tomorrow	53-1021	Supervisors - Helpers, Laborers & Material Movers	WK EXP	6,950	7,270	4.6%	255	N/A	N/A	N/A
Tomorrow	37-1012	Supervisors - Landscaping & Groundskeeping Workers	WK EXP	4,960	5,160	4.0%	103	\$32,980	\$48,410	\$56,120
Tomorrow	49-1011	Supervisors - Mechanics, Installers & Repairers	WK EXP	16,540	17,570	6.2%	433	\$47,220	\$68,940	\$79,800
Tomorrow	43-1011	Supervisors - Office & Administrative Support Workers	WK EXP	55,550	58,460	5.2%	1,130	\$39,160	\$60,410	\$71,030
Tomorrow	39-1021	Supervisors - Personal Service Workers	WK EXP	11,350	12,520	10.3%	332	\$24,790	\$38,110	\$44,780
Tomorrow	51-1011	Supervisors - Production & Operating Workers	WK EXP	28,010	28,140	0.5%	456	\$41,040	\$61,390	\$71,570
Tomorrow	41-1011	Supervisors - Retail Sales Workers	WK EXP	53,210	53,730	1.0%	1,242	\$28,270	\$44,960	\$53,300
Tomorrow	53-1031	Supervisors - Transportation & Vehicle Operators	WK EXP	7,790	8,240	5.8%	295	N/A	N/A	N/A
Tomorrow	25-9041	Teacher Assistants	PS	45,050	46,560	3.4%	1,230	\$18,980	\$26,270	\$29,920
Tomorrow	47-2044	Tile & Marble Setters	LT OJT	1,040	1,140	9.6%	25	\$31,470	\$51,850	\$62,040
Tomorrow	29-2056	Veterinary Technologists & Technicians	AD	4,260	5,040	18.3%	119	\$25,780	\$35,880	\$40,930
Tomorrow	15-1134	Web Developers	AD	4,610	5,700	23.6%	168	\$43,630	\$69,600	\$82,590
Future	13-2011	Accountants & Auditors	BD	59,330	65,170	9.8%	2,168	\$48,100	\$74,730	\$88,040
Future	29-1061	Anesthesiologists	PROF	1,680	1,860	10.7%	63	N/A	\$267,960	N/A
Future	25-1121	Art, Drama & Music Teachers, Postsecondary	MD	5,250	5,720	9.0%	140	\$40,630	\$76,720	\$94,760
Future	25-1042	Biological Science Teachers, Postsecondary	PhD	3,930	4,440	13.0%	121	\$47,560	\$91,030	\$112,760
Future	17-2031	Biomedical Engineers	BD	1,040	1,290	24.0%	52	\$50,320	\$81,640	\$97,300
Future	25-1052	Chemistry Teachers, Postsecondary	PhD	1,620	1,830	13.0%	50	\$48,610	\$86,810	\$105,910
Future	21-1021	Child, Family & School Social Workers	BD	16,870	18,420	9.2%	561	\$29,490	\$42,860	\$49,540
Future	17-2051	Civil Engineers	BD	13,520	14,640	8.3%	511	\$56,490	\$87,890	\$103,590
Future	21-2011	Clergy	BD	15,530	15,640	0.7%	345	\$24,870	\$47,060	\$58,160
Future	27-2022	Coaches & Scouts	BD	8,200	8,430	2.8%	300	\$18,050	\$38,220	\$48,310
Future	17-2061	Computer Hardware Engineers	BD	2,450	2,800	14.3%	85	\$57,120	\$96,200	\$115,740
Future	15-1131	Computer Programmers	BD	15,110	15,000	-0.7%	372	\$53,590	\$80,830	\$94,450
Future	15-1121	Computer Systems Analysts	BD	24,030	29,030	20.8%	809	\$60,460	\$93,520	\$110,040
Future	13-1051	Cost Estimators	BD	9,960	11,000	10.4%	387	\$44,840	\$66,480	\$77,300
Future	15-1141	Database Administrators	BD+	5,540	6,110	10.3%	176	\$53,300	\$83,690	\$98,880
Future	25-2021	Elementary School Teachers	BD+	52,680	53,310	1.2%	1,227	\$43,700	\$65,370	\$76,210
Future	25-1032	Engineering Teachers, Postsecondary	PhD	2,220	2,480	11.7%	65	\$52,660	\$109,070	\$137,280
Future	17-2081	Environmental Engineers	BD	3,280	3,660	11.6%	131	\$57,280	\$87,400	\$102,450
Future	11-3031	Financial Managers	BD+	15,760	16,570	5.1%	454	\$87,490	\$153,180	\$186,020
Future	13-1131	Fundraisers	BD	2,380	2,620	10.1%	56	\$37,400	\$59,770	\$70,950
Future	11-1021	General & Operations Managers	BD+	63,410	67,290	6.1%	1,993	\$61,660	\$130,930	\$165,570
Future	17-2111	Health & Safety Engineers	BD	1,250	1,360	8.8%	47	\$65,380	\$100,610	\$118,220
Future	25-1071	Health Specialties Teachers, Postsecondary	PhD	7,210	8,480	17.6%	255	\$40,500	\$92,280	\$118,170

2018 Pennsylvania In-Demand Occupations List

Jobs of...	SOC Code	SOC Title	Educational Attainment	Employment			Annual Openings	Wages (2017)		
				Estimated 2014	Projected 2024	Percent Change		Entry Level	Annual Average	Exper. Level
Future	21-1022	Healthcare Social Workers	MD	8,290	9,730	17.4%	344	\$36,820	\$51,530	\$58,880
Future	11-3121	Human Resources Managers	BD+	3,510	3,870	10.3%	138	\$81,190	\$130,190	\$154,680
Future	13-1071	Human Resources Specialists	BD	20,300	21,300	4.9%	594	\$42,040	\$66,980	\$79,440
Future	17-2112	Industrial Engineers	BD	9,620	9,860	2.5%	307	\$63,720	\$87,660	\$99,640
Future	15-1122	Information Security Analysts	BD+	2,470	2,890	17.0%	74	\$63,930	\$94,810	\$110,250
Future	23-1011	Lawyers	PROF	31,240	32,960	5.5%	629	\$61,670	\$139,050	\$177,740
Future	13-1111	Management Analysts	BD+	26,760	29,770	11.2%	672	\$51,620	\$88,180	\$106,470
Future	25-1022	Mathematical Science Teachers, Postsecondary	PhD	3,010	3,370	12.0%	89	\$43,170	\$83,100	\$103,070
Future	29-2011	Medical & Clinical Laboratory Technologists	BD	8,620	9,570	11.0%	301	N/A	N/A	N/A
Future	13-1121	Meeting, Convention & Event Planners	BD	3,300	3,650	10.6%	74	\$29,780	\$50,560	\$60,960
Future	21-1023	Mental Health & Substance Abuse Social Workers	BD	10,660	12,380	16.1%	429	\$26,240	\$36,800	\$42,080
Future	21-1014	Mental Health Counselors	MD+	12,170	14,200	16.7%	458	N/A	N/A	N/A
Future	25-2022	Middle School Teachers	BD+	22,800	23,340	2.4%	558	\$41,840	\$65,270	\$76,990
Future	29-1171	Nurse Practitioners	MD	4,000	5,120	28.0%	206	\$73,160	\$98,260	\$110,820
Future	25-1072	Nursing Instructors & Teachers, Postsecondary	MD+	3,200	3,710	15.9%	108	\$45,500	\$76,770	\$92,410
Future	29-1122	Occupational Therapists	MD	6,440	7,820	21.4%	262	\$57,000	\$79,860	\$91,290
Future	15-2031	Operations Research Analysts	BD	2,870	3,660	27.5%	130	\$50,400	\$81,940	\$97,710
Future	29-1041	Optometrists	PROF	1,640	1,880	14.6%	83	\$64,500	\$128,770	\$160,910
Future	13-2052	Personal Financial Advisors	BD+	10,010	12,730	27.2%	523	\$50,210	\$117,510	\$151,150
Future	25-1054	Physics Teachers, Postsecondary	PhD	1,120	1,270	13.4%	35	\$51,020	\$94,270	\$115,890
Future	29-1066	Psychiatrists	PROF	1,060	1,180	11.3%	41	\$85,640	\$202,240	\$260,540
Future	25-1066	Psychology Teachers, Postsecondary	PhD	2,480	2,800	12.9%	76	\$46,390	\$81,750	\$99,420
Future	13-1023	Purchasing Agents	BD+	13,900	14,200	2.2%	412	N/A	N/A	N/A
Future	29-1141	Registered Nurses	BD	130,070	148,240	14.0%	4,886	\$52,100	\$69,820	\$78,670
Future	21-1015	Rehabilitation Counselors	MD	7,720	8,670	12.3%	257	\$24,050	\$37,960	\$44,910
Future	11-2022	Sales Managers	BD+	10,460	10,800	3.3%	281	\$81,130	\$152,300	\$187,890
Future	11-9151	Social & Community Service Managers	BD+	6,500	7,270	11.8%	249	\$43,390	\$66,840	\$78,560
Future	25-1067	Sociology Teachers, Postsecondary	PhD	1,640	1,840	12.2%	49	\$45,630	\$79,410	\$96,300
Future	15-1132	Software Developers, Applications	BD	18,070	20,790	15.1%	530	\$63,420	\$95,660	\$111,780
Future	15-1133	Software Developers, Systems Software	BD	15,810	18,660	18.0%	511	\$71,760	\$102,080	\$117,240
Future	21-1011	Substance Abuse & Behavioral Disorder Counselors	BD	8,650	10,200	17.9%	336	N/A	N/A	N/A
Future	29-1067	Surgeons	PROF	2,290	2,520	10.0%	85	\$68,050	\$210,050	\$281,050
Future	13-1151	Training & Development Specialists	BD+	10,690	11,470	7.3%	338	\$39,790	\$63,810	\$75,820

2018 Pennsylvania In-Demand Occupations List

Jobs of...	SOC Code	SOC Title	Educational Attainment	Employment			Wages (2017)		
				Estimated 2014	Projected 2024	Percent Change	Annual Openings	Entry Level	Annual Average

Educational Attainment Abbreviations:

Short-term or Moderate-term training (**ST OJT** or **MT OJT**) – basic tasks and skills are learned through a period of on-the-job training. A high school diploma may be required.

Long-term training (**LT OJT**) – a high school diploma and at least one year of on-the-job training or an apprenticeship.

Related work experience (**WK EXP**) – a high school diploma and training gained through hands-on work in a similar occupation.

Postsecondary training (**PS** or **PS+**) – training is gained through a postsecondary training program. Some period of related work experience may be required.

Associate Degree (**AD** or **AD+**) – degree completed after two years of full-time schooling beyond high school. Some period of related work experience may be required.

Bachelor's Degree (**BD** or **BD+**) – degree completed after four years of full-time schooling beyond high school. Some period of related work experience may be required.

Master's Degree (**MD** or **MD+**) – degree completed after two years of full-time schooling beyond a bachelor's degree. Some period of related work experience may be required.

Doctoral (**PhD**) or First Professional Degree (**PROF**) – degree programs requiring 3-6 years of education at the college or university level beyond a four-year bachelor's degree.

Additional Resources





FOR A SUCCESSFUL EXPERIENCE



- Call the host site the day before to confirm the date(s), time(s), arrival location and parking location for your visit. Ask about lunch - should you bring one, will they provide one, will you go out to lunch with others?
- Wear appropriate attire for the host site.
- Read/review the company website and handbook (if available).
- Follow all company guidelines and rules of confidentiality.
- Act professionally and stay engaged at all times. Be enthusiastic about what you see and do 😊
- Bring a copy of your work plan to the host site.
- Give employees time to answer your questions - let them do most of the talking.
- Bring a copy of the CEW standards and any other documents of skills you feel might be useful throughout the day.
- Complete detailed notes that you will use to help develop your lesson plan(s).
- Be on the alert to connect and partner with key individuals who can serve as resources to your school and/or education community. Go beyond the needs of your own classroom and keep in mind others who could use the connections and resources.
- Thank people you visit with for hosting you.
- Leave at the agreed upon time.
- Send a thank you note!



To Ask at Worksite



2018-19

Supervisor Questions

1. Please give me a brief description of your company.
2. Who are your clients or customers?
3. Do you have an organizational chart showing how your company is structured?
4. During the past several years, what major industry changes/issues have impacted your company?
5. What changes/issues does your company anticipate having an impact on the company's future development?
6. Describe your company's culture?
7. How many people are employed by the company?
8. How has technology affected the company?
9. What should I be teaching in my classroom to prepare students for employment in a company like this?
10. What would you recommend teachers do to strengthen the relevance of school to the workplace?

Use the next set of labor market questions, if applicable.

Labor Market Questions:

Specify occupational area: _____

1. Do you see the local labor markets' need for new workers in your field increasing, decreasing or remaining steady?
2. Do you have labor market data you use with employers or potential investors?
3. In what specific areas, if any, is there new job growth?
4. How might this labor market change in the next five years?
5. What new skills are required of entry-level employees?
6. What skills are recommended for workers in the field who wish to advance?
7. What, if any, industry certifications do you consider desirable for a prospective employee?
8. What new technologies are emerging in this field?
9. Is there any additional information you would like educators to know?



Human Resource Questions

1. What job classifications does your company have?
 - Clerical/Marketing
 - Unskilled Professional
 - Semi-Skilled Technical
 - Skilled Managerial
 - Other: _____
2. What job classifications do you expect to have the greatest demand within the next five years?
3. What level of education, training, skills, or experiences does an applicant need for an entry-level position?
4. What are some of the core abilities and skills you look for in a new hire for entry level positions?
5. What should I be teaching in my classroom to prepare student for employment in a company like this?
6. What ideas or materials to you currently have that a teacher could use in the classroom?
7. What is the entry-level wage?
8. How do you locate future employees?
9. What training do you give employees?
10. How do you evaluate employees?
11. What is your company policy on attendance/tardiness?
12. What advice would you give a student who is interested in working for your company?
13. How is your company involved in education?
14. How is your company involved in the community?
15. What would you recommend teachers do to strengthen the relevance of school to the workplace?



Employee Questions

1. Please describe your typical workday OR What are your main responsibilities?
2. How long have you been with the company?
3. What level of education or training is needed for your position?
4. What academic and technical skills are required for your position?
5. What should I be teaching in my classroom to prepare students for employment in a company like this?
6. What ideas or materials do you have that a teacher could use in the classroom?
7. How has technology affected your position?
8. What are your work hours?
9. What are the positive aspects of your job?
10. What are the negative aspects of your job?
11. What advice would you give a student who is interested in working in your job?
12. What would you recommend teachers do to strengthen the relevance of school to the workplace?
13. Would you be willing to participate on an academy advisory board?
14. Would you be willing to speak to my class?
15. Would you be willing to allow a student to job shadow?
16. Would you be willing to mentor a student?

Connected Learning

This tool is designed to help you get a better understanding of the level of complexity of the tasks that are performed at the worksite. For each of the competency areas listed below, please **score** the level at which the employees must perform. Write notes to help you justify this score.



Content	Your Score	1	2	3	Notes...
Math		Not used on the job	Perform simple arithmetic computations	Perform complex computations (e.g. calculate interest rates, convert to metric system, etc.)	
Writing		Not used on the job	Write simple messages	Perform more complex writing tasks (e.g. letters, sequential written directions)	
Reading		Not used on the job	Read simple directions (e.g. labels, memos, filing directives)	Read more complex materials (e.g. instructional manuals, reports)	
Task Complexity		Perform simple one-step tasks	Perform multi-step tasks	Perform more than one multi-step task simultaneously	

Content	Your Score	1	2	3	Notes...
Planning & Decision Making		Not a responsibility on the job	Assist in planning steps required to complete multi-step assignments	Helps identify alternative methods to complete multi-step assignments and plan steps	
Problem Solving & Trouble Shooting		Identify problems when performing routine work assignments	Identify problems and possible solutions to routine work assignments	Perform complex, non-routine work assignments that require problem solving	
Computer Technology		No use of a computer on the job	Use a computer for simple word processing and data-entry tasks	Use a computer as a tool for more complex assignments such as spreadsheets, graphs, and charts	
Other Technology		No use of other technology on the job	Perform basic technical tasks	Perform advanced technical tasks such as helping maintain computer networks	

Content	Your Score	1	2	3	Notes...
Client/ Customer Service		No interaction with clients/customers on a regular basis	Convey simple messages to clients	Handle client/customer questions and requests for service	
Oral Communication		Job-related communications consist mainly of asking and answering questions	Prepare and convey simple ideas and information for co-workers and/or external clients	Prepare and convey complex ideas and information to co-workers and/or external clients	
Organize & Analyze Information		File and organize materials	Prioritize information in a systematic way	Read, analyze, and interpret complex information	

Job Shadow Observation Log



Name of TIW Participant: _____

Site: _____

Date of Job Shadow: _____

Please note the skills & personal qualities you observe during your worksite visits that are necessary for solid job performance. Record the ways you see these skills being used and then consider how you could incorporate teaching these skills in your **content area**.

Basic Skills	Way the skill is being used	Classroom Application Notes
Listening		
Speaking		
Team Interaction		
Technology Used		
Academic Skills	Way the skill is being used	Classroom Application Notes
Reading		
Writing		
Mathematics		
Scientific Concepts		
Historical Perspective		
Foreign Language		

Thinking Skills	Way the skill is being used	Classroom Application Notes
Creative thinking		
Decision making		
Problem solving		
Seeing things mentally		
Knowing how to learn		
Reasoning		
Monitoring & Correcting Performance		
Acquiring & Evaluating Data		
Personal Qualities	Way the skill is being used	Classroom Application Notes
Individual Responsibility		
Sociability		
Integrity		
Time Management		
Respecting Diversity		
Teaching Others		

Daily Work-site Log

Name: _____

Date: _____

Company: _____



At the end of each day, take a few minutes to reflect on and record what you have learned in response to the questions and statements here. The responses will help you develop your lesson plan(s) and digital artifact. It is not necessary to respond to every statement or question every day, but you should be thorough in your completion of this form.

1. What did you learn about yourself, your interests, aptitudes, strengths, and weaknesses?
2. Describe the technology or equipment you used or observed being used.
3. Give specific examples of mathematics or science concepts and skills you used or observed.
4. Give an example of oral or written communication you used or observed being used.
5. Describe a work activity you performed and the procedures you followed.
6. Describe special instructions you received from your mentor or another employee.
7. Describe any materials you had to read and interpret to complete an assigned work activity.
8. Describe any initiative you took to learn something new.
9. List a problem you solved or observed being solved, and tell how you or others arrived at a solution.
10. Describe a meeting you attended, and list the decisions made or actions taken. What contributions did you make to the meeting? What happened as a result of the meeting?
11. List something new you learned about the company and its opportunities for employees.

NOTE: You can use your responses to this form to guide the development of your lesson plan(s) and digital artifact.

REQUIRED FORMS



WORK PLAN



Teacher Name:

Host Site (Industry/ies):

Supervisor Name/Names

Work Plan/s (developed by TIW participant and Supervisor)- Describe which activities you will be completing. (See "Suggested Activities for TIW."). If you are visiting more than one work-site please complete a short Work Plan for each site visited.

***TIW Date/s:**

***Hours:**

***Host Site/s Signature/s:**

*If attending more than one worksite please specify Dates for each, hours for each and secure a Host Site Signature for each.



2018-19

TIME LOG

TIW Participant: _____

Name of Host Site: _____

Date	Time IN	Time OUT	Hours	Description of Activities
TOTAL HOURS				

TIW Participant Signature: _____ Date: _____

Host Site Signature: _____ Date: _____

Permission to Photograph/Videotape the Worksite and Employees

Taking photos of the worksite and employees during a teacher externship often provides a valuable resource for teachers and students once teachers return to the school site.

Please grant permission to use these photographs and/or videoclips in teacher created curriculum, on the school website, in school newsletters, in brochures, in presentations, and so on. The photographs will never be sold and will be used exclusively for educational purposes.



_____ **YES**. I grant you permission to use photos taken during the teacher externship.

_____ **NO**. Please do NOT take or use any photos.

Industry/Company Name: _____

Host Name: _____

Host Title: _____

Phone: (____) _____ - _____

Email: _____

TIW Participant Name: _____

Host Site Signature of Permission: _____

Date: _____