



DENVER PUBLIC SCHOOLS
CAREERCONNECT

CareerX

Industry Exploration Program

Business Partner Manual

2015-2016





CONTENTS

Program Overview	2
DPS CareerConnect Model	2
CareerX Events	3
CareerX Learning Objectives.....	3
Knowledge of Career Pathways	3
Motivation	3
Professionalism	3
Innovation and Entrepreneurship.....	3
Developing a CareerX Event Agenda.....	3
Sample Agenda: IBEW CareerX Event.....	4
How to Create a Great Event.....	6
Before students visit the worksite:	6
During the job shadow experience:	7
Hands-On Learning	7
Talking Points for Staff.....	8
Program Evaluation	8
Business Partner Commitments	9

Program Overview

Thank you for your interest in being an employer host or participating school with DPS' Job Shadow Program as part of Denver Public Schools (DPS) CareerConnect Program. DPS CareerConnect programs in STEM, business, and the arts are available in neighborhoods across Denver. Our classes focus on engaging, hands-on courses in relevant topics to prepare students for the workforce and higher education.

In spring of 2014, Denver Public Schools was awarded a \$7 million Youth CareerConnect grant by the Department of Labor to prepare students for STEM (science, technology, engineering and math) related careers. While much of our growth is focused on 9-12 coursework, a critical part of our expansion includes **work-based learning** which includes industry exploration, mentoring and internships. Six STEM career areas were selected for the grant based on labor market data reflecting the need for highly skilled workers in these industries: Advanced Manufacturing, Engineering, Engineering/Energy Focus, Biomedical/Health Care, Information Technology and Finance.

DPS CareerConnect Model

The CareerX Program is part of a continuum of work-based learning (WBL) experiences that support and augment student academic development through the high school years (Table 1).

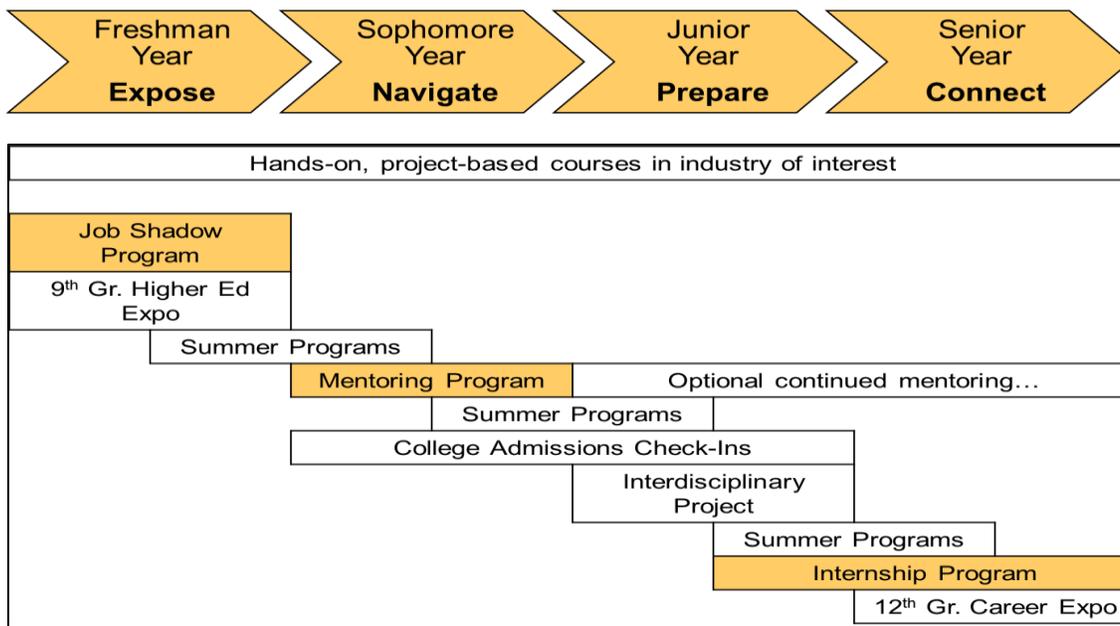


Table 1: CareerConnect Model



CareerX Events

CareerX events provide real-world exposure to companies representing a variety of industries. During CareerX events, students learn about the company's history, products and services, and the careers represented within the company. They are also introduced to career paths including the post-secondary education required for careers in the industry.

Students then participate in hands-on activities led by industry professionals usually done in small group rotations. Career X Industry Exploration events aim to help students make more informed career choices, build supportive relationships within their chosen field and prepare for rewarding careers.

CareerX Learning Objectives

Job shadow experiences are designed to meet the following objectives:

Knowledge of Career Pathways

- Students will explore career pathways and specific occupations.

Motivation

- Students will discover the applications of academic knowledge to the world of work.
- Students will understand the postsecondary educational requirements of industry-specific occupations.

Professionalism

- Students will gain exposure to professional role models in various industries.

Innovation and Entrepreneurship

- Students will gain practical understanding of industry context, educational requirements, sector innovations and specific business models.

Developing a CareerX Event Agenda

DPS CareerConnect staff will work with your staff to develop an engaging, interactive half day event featuring unique aspects of your industry and exposing students to careers represented in your company.

Below is a sample CareerX event agenda created by the International Brotherhood of Electrical Workers (IBEW) which includes an overview of the electrical apprenticeships, 3 hands on activity stations featuring different levels of the electrical career and a closing session for Q & A.

Please use this agenda as a starting point to create your company's own unique event.

Sample Agenda: IBEW CareerX Event

Purpose	To provide an opportunity for DJEATC 68 and IBEW68 to showcase Renewable Energy Systems and Electrical Industry careers to local high school students and Support STEM Education		
Goals	<ol style="list-style-type: none"> 1. Introduce high school students to Electrical Apprenticeship as a Post-Secondary Pathway. 2. Introduce students to the construction of Renewable Energy Systems such as Photovoltaic and Small Wind in the electrical construction industry. 3. Introduce students to a variety of job descriptions within the electrical industry by representing these job positions as actual mentors- Students will work with employees of Electrical Contractors who represent the positions of project management, electrical foreman, journeyman electrician and electrical apprentice. 4. Provide students with a hands-on work opportunity that mimics the construction of an actual Photovoltaic system installation. This hands-on experience will be a controlled environment that emphasizes safety, team work, and peer mentoring 		
ACTIVITY	TIME	ACTIVITY DESCRIPTION	NOTES/EXECUTION
DPS arrival	8:45 AM	Students arrive	
Orientation and Introduction Session	9-9:10 AM	All students convene <ul style="list-style-type: none"> • <i>Explanation of event format</i> • <i>DPS Staff and Student Introductions</i> 	Hard hats, safety glasses, and clipboards provided to students Staff explains why IBEW is providing this event.
DJEATC Introduction and 'promotional' fact sheet		Apprenticeship Coordinator will address: <ul style="list-style-type: none"> • Mission and Purpose of the DJEATC68 • <i>Share fact sheet with sector opportunities, pay-scale, high-skill emphasis (turnout rate), transferability</i> 	DJEATC Training Director leads
Electrical	9:10-9:30	1. Project Mgr.	Introduce the "mentors": each



Industry Mentor introductions	AM	<ol style="list-style-type: none"> 2. Foreman 3. Journeyman Electrician 4. Apprentice Electrician 	<p>gives a 5 minute talk about their careers</p> <p><i>Talking Points:</i></p> <ul style="list-style-type: none"> • <i>Personal focus</i> • <i>Skills needed for the job (details, repetitive, problem solving, etc.)</i> • <i>What does this career make possible for you? What kind of lifestyle?</i>
Group Division (count off) format	9:30-9:35	Students divide up and are assigned to specific mentor. Students count off into three groups.	Explain workstation format. Mentors will guide students to the stations
Job Shadow	9:40-11:00	<p>Station One (20min): Explain the purpose and the tasks of this station</p> <ol style="list-style-type: none"> 1. <u>Project Manager</u> explains the Electrical Drawing. 2. Gives overview of the system and the types of skills needed for this station. 3. Students will examine the system on a large presentation board, walk through the components and their function using the Power Point <p>Station Two (20min): Led by <u>Electrical Foreman</u> leads tour of systems with an emphasis on the tools and material required for the installation</p> <p>Station Three (20min): Led by <u>Journeyman Electrician</u></p> <ol style="list-style-type: none"> 1. Each of the students will be given a PV wiring kit to practice with 	<p>Station One: Students are given handouts with</p> <ol style="list-style-type: none"> a. Mini- one line drawings. b. They are tasked with matching pictures of system components on their one line drawing c. Have students participate in building the one-line on the board <p>Station Two</p> <ol style="list-style-type: none"> 1. Students will learn how to locate the PV modules, shown the racking system, how the modules interconnect then the inverter, disconnects and electrical panel, and electrical distribution system. <p>Station 3</p> <ol style="list-style-type: none"> 1. Hands on Wiring exercise with the PV Wiring Kit 2. Observe a small PV grid tied system within the



		<p>(10min). Journeyman will lead kit activity.</p> <p>2. Journeyman then leads the students to the craft certification booth to observe the pieces of equipment necessary for a PV installation-(5 Min)</p> <p>3. Journeyman demonstrates the light switch boards and students wire (10 min).</p>	<p>safety of a de-energized Craft Certification Booth.</p> <p>3. The Booth consists of:</p> <ul style="list-style-type: none"> a. pre-installed PV modules on a mock roof surface b. connect to a back-feed breaker in an electrical panel c. feed out of a disconnect to an electrical production meter
Q & A, Evaluation, Wrap Up	11:00-11:25	All staff available to answer questions and lead wrap up	
Lunch	11:25-11:45		

How to Create a Great Event

The following factors can contribute to an event that is informative, engaging and interactive for students.

Before students visit the worksite:

1. Set up one-hour planning meeting with the DPS CareerX Coordinator.
2. Prior to your planning meeting, assemble an internal team to plan for your CareerX day. The team should include employees in your company who are excited to share their knowledge and expertise with young people. A CareerX Champion should be designated as the point person for future communications.
3. Once the team is assembled—but before the planning meeting, create a rough draft of your agenda for the job shadow day. The agenda should include the following components:
 - Overview of various careers represented in your company and the associated educational pathways to get there.
 - Opportunities for students to experience aspects of various careers within your industry through hands-on, engaging activities.



- Opportunities to interact with your staff in small groups to allow for more informal interactions with students. This time can be used to address questions and share personal stories, coach students on how to prepare for success in the workplace, etc.

4. Finalize the agenda with input from the CareerX Coordinator and set a date.
5. When possible, schedule a rehearsal with DPS staff.

During the job shadow experience:

1. *Welcome Sessions.* A CareerX event usually begins with a welcome session, including a brief overview of the company, safety rules, introduction of personnel, and information about the day's schedule.
2. *Welcoming gestures.* Small things like having a company name badge made up for participants or providing them with a notebook with company materials can go a long way in making students feel valued.
3. *Participation.* Students learn well by doing. Mock projects, scenarios (e.g. how would you deal with this situation?), team projects, or other participatory activities are ideal. Students also benefit from exposure to the actual 'tools of the trade'—e.g. software, equipment, or the "people skills" necessary for a particular line of work.
4. *Lunch.* If shadowing occurs during lunch, arrangements are made to provide a facility for eating at the worksite.
5. *Academic connection.* Where possible, job shadows help students identify the courses they should be taking in high school to help prepare for a particular career and [link academic content](#) to day to day business operations within your industry.

Hands-On Learning

Below is a list of possible activities for the "hands-on" portion of the CareerX event.

1. Student participation in mock projects adapted from an employee workday
2. Problem solving scenarios ('how would you handle this?' exercises)
3. Opportunities to use special work tools such as a soldering iron, a pipe locator, microscope, etc.
4. Demo of work task with students assisting employee (ex. Students generate data that programmer codes into computer program.)
5. Mock interviews



6. Activities that demonstrate a concept such as having students analyze the task of frying an egg to understand all of the steps involved in programming a computer to perform a task.
7. Have staff role play the various roles on a team that contribute to completing a task.
8. Use your imagination for other creative activities!!

Talking Points for Staff

If you are working with staff who are unsure what to share with high school students visiting your company, these talking points may help generate some ideas about the kinds of topics to cover during their time with the students. Some companies have used these to create a script for their employees, others have included them in the agenda.

1. What is a typical day at work like? What are your job duties?
2. What interested you about this field?
3. What kind of education did you need to enter this field?
4. What experience or skills are required for your position?
5. What does the future hold for people in this career? Is this field growing?
6. What do you like about your career? What don't you like?
7. What would you recommend to someone who wants to pursue this career?
8. What are the opportunities for advancement or growth in this field?
9. What do you know about your job now that you wish you had known earlier?
10. What skills and knowledge learned in high school have you used during your career in this field?
11. Please provide some examples of related jobs in your field.
12. What is the salary range for someone in your field?

Program Evaluation

In order to gauge the effectiveness of the CareerX program, DPS asks both students and all employees who participate in the event to complete an on-line program evaluation. Survey Monkey links will be provided at the conclusion of the CareerX event and if possible, both students and staff will complete the evaluation at that time.

DPS staff will send an official thank you letter and a summary of student and staff data to the company host within one week of the event.



Business Partner Commitments

Job shadows are typically 3-4 hours and are held anytime between 8:30 AM-2:00 PM. Student groups range from 10-30 students and are accompanied by at least 2 DPS staff. Businesses typically offer 4 events per school year (from mid-September to mid-May) but are not obligated or limited to that number.