

APPRENTICESHIP

APPRENTICESHIP

- apprentice
- employer
- training program sponsor
- local education agency



School-to-Career/Apprenticeship

Orientation to Apprenticeship

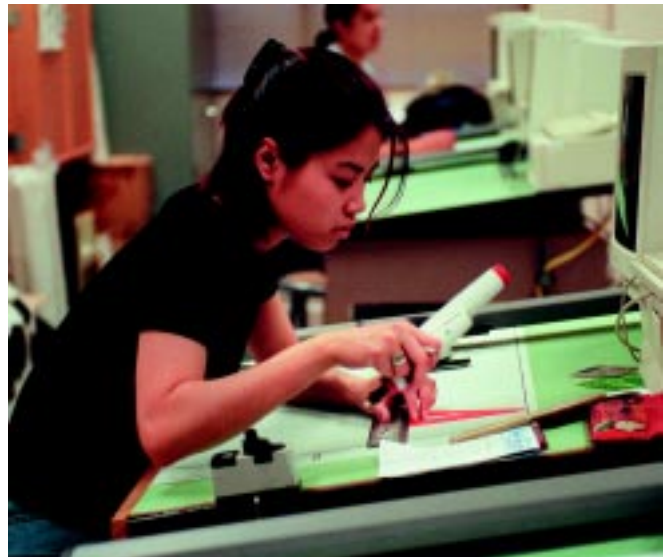
a guide for educators

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Surveyor



Drafting

Statement of Purpose

This guide is designed to introduce educators to career opportunities for young people in apprenticeable occupations. It answers commonly asked questions and provides a guide to educators interested in including **Orientation to Apprenticeship** in their curriculum. The guide provides course outlines for three levels of student involvement starting from a brief introductory level to a more detailed and defined pre-apprenticeship model.

Preparing students for the world of work not only provides students with a direction for career choices, but also gives them a reason and purpose for increasing academic excellence. The curriculum in an **Orientation to Apprenticeship** course supports high standards and accountability in order to prepare students for continuing in an educational setting and meeting the requirements for entrance into registered apprenticeship programs upon high school graduation.

This guide also works in concert with the **California Workforce Development: A Policy Framework for Economic Growth** document. “Policy: Engage the private sector as a full partner in every aspect of workforce policy and systems development, program operations, and delivery of services.” “Recommended actions: Organized labor, employers, education governing bodies, and the appropriate state agencies should work together to expand the apprenticeship system, both in numbers and scope, in order to maximize the effectiveness of the apprenticeship model within the workforce development system.”



Culinary

Acknowledgements

We would like to acknowledge the support and assistance of the many people who participated in the development of **Orientation to Apprenticeship: A Guide for Educators**. This guide was produced in response to the many inquiries about pre-apprenticeship from educators around the State of California who were looking for additional opportunities for high school students seeking information on careers and work options open to them upon high school graduation.

Orientation to Apprenticeship: A Guide for Educators was developed under the direction of the California Apprenticeship Council (CAC) with the support of the Director of the Department of Industrial Relations (DIR), Stephen Smith, and the Chief of the Division of Apprenticeship Standards (DAS), Henry Nunn. The School-to-Career/Apprenticeship Ad Hoc Committee of the CAC was given the responsibility for producing this document.

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Apprenticeship: A Pathway to Success

// *The apprenticeship program has helped me in many different ways....It has helped me to develop a confidence I didn't have before, that I could accomplish anything no matter what it is...I am also in training to be a foreman and am an instructor for a first year, first semester apprenticeship program."*

Sonja Vasquez, Electrical Journeyman, LA County

Why should a school want to participate in a program that would introduce students to apprenticeship?

- Students who participate in work-based learning programs become more focused in school because they understand the relationship between the information learned in school and the skills necessary to be successful in the work place.
- Apprenticeship provides an important link and opportunity for all students to move successfully into continuing an educational pathway and entering the workforce for economic independence.
- Students are more likely to be able to understand the big picture—why education is important.
- Including Orientation to Apprenticeship in a curriculum or career pathway supports students achieving high academic skills.

Pre-tests are required for entrance acceptance in some apprenticeship programs. Note the following sample test questions:

Surveyors:

1. The expression $5^2 + 2 - (4 \div 2)$ is the same as:
A. 225 B. 25 C. 125 D. 27
2. A board of 10 ft. 10 1/2 in. is to be cut into three equal parts. What is the length of each part?
A. 3' 3 1/8" B. 3' 4 5/8" C. 3' 11 1/8" D. 3' 7 1/2" E. 3' 8 1/4"

Electricians:

3. Consider the following formula: $y = 3(x + 5)(x - 2)$ Which of the following is equivalent to this one?
A. $y = 3x^2 + 9x - 30$ B. $y = x^2 + 3x - 10$ C. $y = 3x^2 + 3x - 10$ D. $y = 3x^2 + 3x - 30$
4. You will be presented with a picture of a piece of paper with folds and cuts, followed by four (4) three-dimensional objects. You must decide which of the three-dimensional objects could be made by folding or rolling the piece of paper.

Answers: 1. B 2. D 3. A

Statistic: School-to-Career and work-based programs are more effective for student learning.
(*New York School-To-Career Initiative, Westchester Institute for Human Services Research Inc. 1998*)

What's in it for students?

- High wage/high skill occupations
- An "earn and learn" educational experience
- FREE tuition for apprenticeship courses
- Proficiency in an occupation
- High self-esteem
- State of California issued certificate recognized internationally
- Opportunities to move into a variety of different positions within the field or trade

APPRENTICESHIP

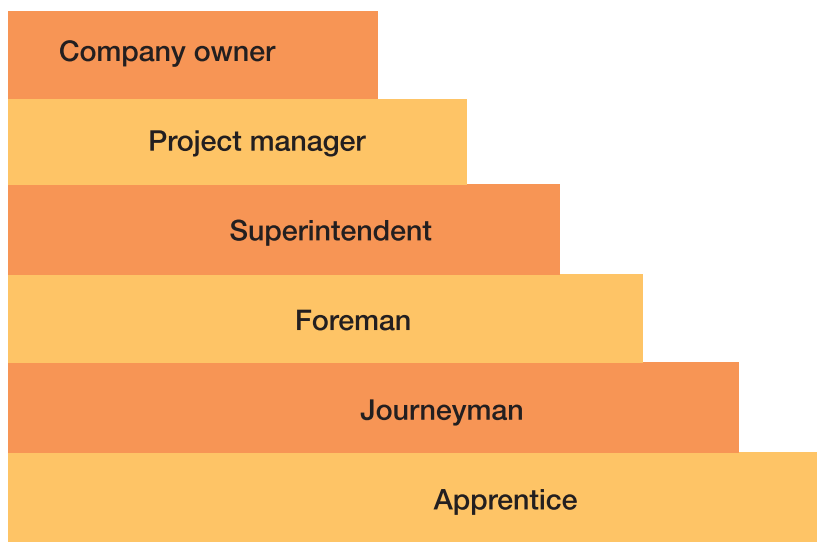
Apprenticeship programs have many opportunities that may include, but are not limited to, the following:

- paid medical, retirement, dental, and/or vision plans
- college credit and sometimes a college certificate or degree upon program completion.

Statistic: A class of 1997 School-to-Career graduates had higher employment rates after graduation than non-School-to-Career students. (*Boston Pro-Tech Initiative, Jobs for the Future and Boston Private Industry Council Survey, 1997*)

What could I tell a parent that would help them to understand the value of an apprenticeable occupation for their child?

- Apprenticeship supports a strong academic foundation in reading, mathematics, and communication skills.
- Apprenticeship is a viable avenue for obtaining a lucrative, professional, and marketable career.
- An apprenticeship program offers paid employment while training for a career. It provides an opportunity to become proficient in an occupation by attending classes that are integrated with the workplace.
- Many opportunities are open to apprentices who complete their training. In the construction trades, for example, upward mobility in the profession allows a student to plan a career ladder:



In addition, serving as an apprentice may peak the interest in a student to plan for a parallel profession (i.e. labor law attorney, engineer, architect, state regulator, safety or environmental specialist, instructor, estimator, inspector, etc.).

Statistic: Ninety percent of teens say school would be more interesting and meaningful if it was taught in connection with careers. (*Teen Attitudes Toward Work, Bruskin Goldring Research 1994*)

What is apprenticeship training?

Apprenticeship is training that is designed to prepare an individual for a career in the skilled crafts and trades. Apprentices develop technical skills, experience the sharing of assignments, and see how technical tasks relate specifically with theoretical knowledge and interpretation. Currently, there are more than 850 apprenticeable occupations in the United States and over 200 registered apprenticeable occupations active in California. Apprentices earn a wage while learning. Apprenticeship training usually requires one to five years to complete, depending upon which occupation is chosen.

The apprenticeship training system is unique in that its basic foundation is a **partnership** between **industry, education, and government**. Industry funded and industry driven, the apprenticeship training system provides an effective balance between on-the-job training and theoretical instruction in an effort to develop workers with marketable skills. **Without industry support and participation, apprenticeship does not exist.**

What is an apprentice?

An **apprentice** is an individual who has been officially registered with the Division of Apprenticeship Standards in a state approved apprenticeship program. An **apprentice** develops marketable job skills in a structured, coordinated work and school training program. Being of legal working age, he or she should possess the aptitude, physical condition, and desire to succeed in the specific craft/trade.

What is pre-apprenticeship?

Educators often use **pre-apprenticeship** to describe an articulated and integrated educational program that: 1) provides information to students regarding apprenticeship programs; 2) improves reading, writing, and math skills necessary to qualify for an apprenticeship program; and/or 3) offers classroom instruction and job training which guides a student to a registered apprenticeable occupation. It should be noted, however, that some trades use the term **pre-apprentice** as a classification of worker. In order to avoid confusion, this guide uses **orientation to apprenticeship** rather than **pre-apprenticeship** when referencing a secondary level educational program.

Statistic: School-to-Career students spend more time on homework and feel more challenged by course work than non-School-to-Career students. (New York School-To-Career Initiative, Westchester Institute for Human Services Research Inc. 1998)

What does an *Orientation to Apprenticeship* program include?

It will...

- introduce students to what they need to know in order to apply, test, and interview for acceptance into an apprenticeship program.
- demonstrate the need for proficiency in reading and comprehension (technical manuals and blueprints), mathematics (basic math, algebra, and geometry), science (concepts and principles), and technology (computer operations and processing information).
- emphasize the necessity to have the ability to communicate in reading, writing, speaking, listening, and numeration skills.
- identify the knowledge, skills, and attitudes needed to enter and successfully complete an apprenticeship program.
- provide an orientation to a specific craft/trade (carpenter, nurse, machinist, correctional officer, etc.) or to an industry (building and construction, fire fighting, health care, culinary, automotive, law enforcement, etc.).

How do I begin?

In this booklet, three levels of *Orientation to Apprenticeship* have been made available for your perusal, offering a choice of commitment and involvement. Level I, II, and III are only samples. They may be used independently or in combination, depending upon the type of program you want to establish. They can be modified to fit any apprenticeable occupation. Look for and research resources for assistance. Contact the Division of Apprenticeship Standards (DAS) and request the Orientation to Apprenticeship Resource Handout. (415) 703-4920 or www.dir.ca.gov/das

Decide what type of program you need in your district and look at the sample outlines.

- Level I is a simple inclusion of information about apprenticeship in an existing course that includes career exploration in the curriculum (see pg. 8).
- Level II is intended to be a short-term class or specific unit of study in an existing class (see pg. 9).
- Level III is a course that is linked with a registered apprenticeship program that provides students in-depth hands-on use of tools, materials, and processes appropriate to a specific occupation (see pg. 11).

Okay, I have selected a level of *Orientation to Apprenticeship*, what's next?

- Identify the appropriate Industry Partners
- Gather Resources (labor/management, school district, community college, California Department of Education, Regional Occupational Center/Program)
- Form a Steering Committee (include representatives from industry, school and district office staff, school board, community college, and parents)

Steering Committee responsibilities:

- create a mission statement/goals and objectives
- plan curriculum (involve enthusiastic educators and industry representatives)
- look for resources (i.e. funding)
- design a strategy for recruitment (promotional material)
- pursue community college articulation
- establish internships
- utilize mentors
- set up a speakers' bureau of journeymen and employers
- design a system for on-going program evaluation and student assessment

Use your industry partner to assist in obtaining support and involvement from the school board, district superintendent, school principal, and teachers. Be innovative in planning your activities.

What is the role of industry?

In addition to its major role of employment, industry plays a strategic part by providing input on changes necessary to keep the curriculum current with industry standards and needs. Industry can also assist in developing appropriate work processes to be learned in the classroom and on the job.

What occupations have apprentices?

See *List of Apprenticeable Occupations* on page 14.

“...After high school, I couldn’t find good paying work that I enjoyed...I began working as an apprentice making a decent livable wage with full benefits...two years have passed and now I make good money and have a stable, healthy, and exciting lifestyle.”

Christopher Carlman, 2nd year Carpenter Apprentice, San Diego County

How do I sell *Orientation to Apprenticeship* to students and parents?

Talk to them! Have an evening career orientation and invite speakers from various industries, both employers and journeymen in the field.

- Inform parents that students are more likely to understand why they need problem solving and decision-making skills. Students can better understand the reason for learning mathematics, having reading and comprehension skills, and being able to analyze situations.
- Emphasize that ***Orientation to Apprenticeship*** programs, like other forms of work-based learning, can show significant benefits in developing higher academic skills and preparing students for the workplace.
- Emphasize the advantage of earning a wage and receiving fringe benefits while you learn. An apprenticeship program offers paid employment while training for a career, and the related and supplemental ***classes to continue their education are free!***
- Discuss the many opportunities that are available in an occupation. Inform parents that going into an apprenticeable occupation does **not eliminate** the option of going to college. On the other hand, it may be the catalyst that inspires a student to pursue an opportunity in a field, which requires a college degree. It can also provide a student with the \$\$\$\$ (income) necessary to go to college.
- Remind them that Apprenticeship guarantees that an individual will have a marketable skill that may be used wherever they go!

Statistic: A four year study (1992-96) of a single group graduating from a California Partnership Academy found that only 57% of the students (9th graders) entering the academy had earned all of the credits needed to make normal progress toward graduation. However, by the time these academy students completed their 12th grade, 96.5% of them had earned all or 100% of the credits needed for graduation. (*Four Year Report on the Effectiveness of California Partnership Academies*, CDE, by Dr. Eileen Warren, California Institute on Human Services, Sonoma State University, 1998)

Apprenticeship Legislation

- ***Federal:*** 1934 Federal Committee on Apprenticeship and the Apprentice Training Service was established, later becoming the Bureau of Apprenticeship Training (BAT), and is currently known as Apprenticeship Training, Employer and Labor Services (ATELS)
- ***Federal:*** 1937 Fitzgerald Act: BAT was made a permanent agency of the Department of Labor (DOL)
- ***State:*** 1939 Shelley-Maloney Act:
 - established the California Apprenticeship Council (CAC) as a policy-making body for issues relating to apprenticeship
 - named the Director of the Department of Industrial Relations (DIR) as the Administrator of Apprenticeship
 - identified the Chief of the Division of Apprenticeship Standards (DAS) to carry out the responsibilities of the Division in issues relating to apprenticeship(Reference: *The Apprenticeship Law in California, January 1998* and *Title 8 Excerpts California Code of Regulations, California Apprenticeship Council*, Department of Industrial Relations, State of California)

LEVEL I

COURSE OUTLINE

Course Title: Apprenticeship Awareness

Description: Level I is intended to provide students with an opportunity to explore career options. This can be used in conjunction with any course where the curriculum is designed to raise student awareness of various career choices.

Prerequisites: None (Computer and Internet skills recommended)

SCANS* Skills Utilized:

- ▶ Ability to communicate
 - ▶ Ability to analyze
 - ▶ Problem solving/critical thinking
 - ▶ Using technology as a tool for learning
 - ▶ Career planning
 - ▶ Reading and writing ability
-

UNIT I: Apprenticeable Career Options (2 to 6 hours)

The student will be able to:

- discuss the history and background of apprenticeship.
- describe various apprenticeable occupations.
- investigate an apprenticeable occupation in the trades.
- identify the application procedures used for a specific apprenticeship program.

UNIT II: Information on Apprenticeship (3 to 6 hours)

The student will be able to:

- gather information on various trades by using a Web site or library/resource center.
- write a 500-word essay on one of the apprenticeable occupations in California.
- prepare a comparison chart demonstrating the use of math skills in six apprenticeable occupations.
- identify appropriate technical manuals for six apprenticeable occupations and describe their use in the occupation.

UNIT III: Career Development Opportunities (3 to 6 hours)

The student will be able to:

- prepare a list of questions to obtain information concerning an apprenticeable occupation.
- develop a career path demonstrating upward mobility in an apprenticeable occupation.
- identify employment lead sources.
- research prospective employers in an apprenticeable occupation.
- prepare an economic data sheet demonstrating income projections over a five year period.
- visit an apprenticeship training facility in order to reinforce the concept that an apprenticeship pathway can provide a rewarding career choice.

* Secretary's Commission on Achieving Necessary Skills

LEVEL II

COURSE OUTLINE

Course Title: Apprenticeship Exploration

Description: Level II is intended to be an introduction to apprenticeship through a series of activities that will acquaint a student with career choices and the opportunities and advantages of entering an apprenticeship program. Both classroom study and hands-on-training will be utilized. The intent is to provide a student with a broad range of career options while in school, thus enabling the student to begin the process of entering his/her career field of choice. The sample given will focus on careers in the building trades.

Prerequisites: Reading, Mathematics, Computer and Internet skills

SCANS Skills Utilized:

- ▶ Ability to communicate
 - ▶ Social interaction
 - ▶ Ability to analyze and evaluate
 - ▶ Problem solving/critical thinking
 - ▶ Using technology as a tool for learning
 - ▶ Career planning
 - ▶ Application of mathematics
 - ▶ Reading and writing ability
-

UNIT I: Apprenticeship: Pathways to Success (2 to 3 hours)

The student will be able to:

- describe the evolution of modern-day apprenticeship.
- compare Federal and State laws that relate to apprenticeship training.
- identify the role of the California Apprenticeship Council and the Division of Apprenticeship Standards.
- identify the major duties and responsibilities of an Apprenticeship Committee.
- describe the responsibilities of an apprentice.-

UNIT II: Identification of Basic Tools and Equipment (2 to 3 hours)

The student will be able to:

- identify a variety of tools used in the trades.
- classify tools by their intended use on the job.

UNIT III: Basic Safety (2 to 3 hours)

The student will be able to:

- describe the California Occupational Safety and Health Act (CAL-OSHA).
- discuss the importance of properly maintaining tools.
- demonstrate proper safety procedures in using tools.
- identify proper safety procedures used in various trades.
- describe the importance of correctly tying a variety of knots used in various trades.

UNIT IV: Developing A Positive Attitude Towards Work (2 to 3 hours)

The student will be able to:

- discuss the need for punctuality and dependability on the job.
- demonstrate proper introduction techniques (firm handshake, good eye contact, etc.).
- identify the key principles in getting along with people.
- discuss the need for personal hygiene in the work place.
- specify the different types of clothing required for various situations (work, home, and leisure time).

UNIT V: Plans and Specifications (2 to 3 hours)

The student will be able to:

- distinguish between plans and specifications.
- describe the process of developing plans (blueprints).
- differentiate parts of a set of plans (blueprints).

UNIT VI: Diversity in Apprenticeship (2 to 3 hours)

The student will be able to:

- identify major Federal and State legislation affecting affirmative action in the work place.
- describe the changes in the workforce over the last sixty years in terms of gender.
- identify non-traditional occupations.
- distinguish among various factors that influence an individual's selection of a career.
- define sexual harassment.

UNIT VII: Labor and Management Relations (2 to 3 hours)

The student will be able to:

- differentiate labor and management.
- identify the major purpose of the Davis Bacon Act.
- identify reasons and evaluate historically why workers did or did not organize.
- explain the significance and constraints of a picket.
- describe importance of labor/management relations in the work place.

UNIT VIII: Trade Presentations (4 to 8 hours)

(An apprenticeship training coordinator or tradesperson will present information on his/her specific trade. It is anticipated that at least 10 occupations should be presented.)

The student will be able to:

- discuss the various career opportunities in a trade.
- identify basic hand and power tools of a trade.
- solve selected math problems associated with a trade.
- describe various safety procedures used in a trade.
- distinguish among the various work processes of a trade.

UNIT IX: Preparing for and Evaluating Career Pathways (4 to 8 hours)

The student will be able to:

- successfully complete a criterion-referenced post-test.
- identify at least one apprenticeship program in which he/she has an interest.
- describe the application and entrance procedure for at least one apprenticeship program.
- participate in a series of mock interviews.

LEVEL III

COURSE OUTLINE

Course Title: Architecture, Construction & Engineering (ACE Pathway)

Description: Level III presents career preparation using the apprenticeship model in that it combines on-the-job training with classroom instruction. This is an example of an *orientation to apprenticeship* course that will teach students what they need to be able to do to gain the skills necessary to be accepted into an apprenticeship program. The sample used is for an Architecture, Construction & Engineering pathway course that should be: 1) in partnership with a state registered construction program, 2) associated with a Regional Occupational Center/Program or Adult Education program, and 3) articulated with a community college for college credit and/or concurrent community college enrollment.

Prerequisites: Algebra, Geometry, Reading, Computer and Internet skills

SCANS Skills Utilized:

- ▶ Ability to communicate
 - ▶ Team work and social interaction
 - ▶ Ability to analyze and evaluate
 - ▶ Problem solving/critical thinking
 - ▶ Awareness of creative works of others
 - ▶ Ability to make an oral presentation
 - ▶ Using technology as a tool for learning
 - ▶ Career planning
 - ▶ Application of mathematics
 - ▶ Reading and writing ability
 - ▶ Ability to develop a form and collect data
 - ▶ Understand the value in lifelong learning
-

UNIT I: Introduction to the Construction Industry (1 to 3 hours)

The student will be able to:

- compare various trades within the Construction Industry.
- distinguish between Manufacturing and Construction Industries.
- identify and prepare a chart of various career pathways within specific trades.

UNIT II: Architecture: Residential Drawing/Design and Project Preparation (6 to 54 hours)

The student will be able to:

- differentiate between plans and specifications.
- identify various residential plans (blueprints).
- sketch a design for a storage shed project (not to exceed 120 square feet).
- prepare scale drawings of the project by using drafting instruments and/or CAD.
- perform mathematical calculations appropriate for the project design.
- construct a timeline schedule for project completion using a computer spreadsheet.
- prepare a cost estimate spreadsheet and give an oral presentation to justify expenses.

UNIT III: Safe Working Procedures in the Construction Industry (2 to 3 hours)

The student will be able to:

- describe the California Occupational Safety and Health Act (CAL-OSHA).
- discuss the importance of properly maintaining tools.
- demonstrate proper safety procedures in using tools.
- identify proper safety procedures used in various trades.
- describe the importance of correctly tying a variety of knots used in various trades.
- identify and tie various knots/hitches properly.

UNIT IV: Carpenter's Role in Building a Storage Shed (9 to 24 hours)

The student will be able to:

- analyze various tasks in the Carpenter trade.
- list the basic portable power tools used by a Carpenter.
- identify the common hand tools used by a Carpenter.
- distinguish between load-bearing walls and partitions.
- identify the parts of a typical interior wall section.
- frame a wall section.

UNIT V: Cement Mason's Role in Building a Storage Shed (6 to 18 hours)

The student will be able to:

- describe the various jobs found in the Masonry trades.
- estimate the volume of concrete required for the specific project.
- identify the common tools used in the Masonry trades.
- mix concrete.
- build a concrete foundation.

UNIT VI: Drywall/Lather's Role in Building a Storage Shed (6 to 18 hours)

The student will be able to:

- differentiate between Drywall Installers and Drywall Finishers.
- identify the equipment and supplies needed to install drywall.
- install a section of drywall.

UNIT VII: Electrician's Role in Building a Storage Shed (3 to 12 hours)

The student will be able to:

- describe the duties of an Electrician.
- define and use common electrical terms.
- identify various types of electrical tools and equipment.
- wire a typical wall section that includes a receptacle, light, and switch.

UNIT VIII: Painter's Role in Building a Storage Shed (3 to 12 hours)

The student will be able to:

- list the reasons for painting and treating a surface.
- list the common types of paints and describe their uses and characteristics.
- prepare a surface to paint.
- apply at least two coats of paint to a surface.
- clean a paintbrush and roller.

UNIT IX: Plumber's Role in Building a Storage Shed (3 to 18 hours)

The student will be able to:

- identify the types of materials used for pipes and how they are attached to fittings.
- identify common pipefittings used in residential construction.
- demonstrate the soldering of copper tubing.
- install plastic pipe.
- install a sink.

UNIT X: Roofer and Waterproofer's Role in Building a Storage Shed (6 to 12 hours)

The student will be able to:

- identify the common tools used by a Roofer.
- identify the types of materials used in residential roofing.
- estimate the amount of roofing materials needed for a storage shed.
- install roofing materials in accordance with the manufacturer's recommended procedures.

UNIT XI: Additional Career Presentations (3 to 24 hours)

- Bricklayer
- Engineer
- Floor Covering Installer
- Inspector
- Ironworker (field)
- Ironworker (shop)
- Machinist
- Plasterer
- Sheet Metal Worker
- Sound/Communication Systems Installer
- Sprinkler Fitter
- Surveyor
- Tile Finisher
- Truck/Diesel Mechanic

UNIT XII: Mentor/Job Shadowing (6 to 20 hours)

The student will participate in a job shadowing program that will link the student with an individual (i.e. journeyman, manager, etc.) in an apprenticeship program registered by the State of California. The student will tour the mentor's work site and spend time learning about his/her typical work areas and responsibilities. The student will discuss career opportunities and educational requirements of that occupation.

Additional Activities

Students can be put into teams (labor/management) and given the opportunity to discuss and plan activities around the following issues: hiring, employee training, work scheduling, performance evaluations, overtime, downtime, benefits, safety, journeyman's role vs. apprentice's role, product quality, new technology and equipment, understanding differing cultural/ethnic backgrounds, ergonomics, conflict resolution, strategies for negotiating, seniority, public work/private work, etc.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF APPRENTICESHIP STANDARDS

LIST OF APPRENTICEABLE OCCUPATIONS

(partial listing)

Acoustical Installer	Electric Tool Repairer	Litho Stripper Platemaker	Printer 2
Activity Director	Electric Trolley Maintenance Mechanic	Lithograph Combination Skills	Programmer Technical
Air Balance & Testing Technician	Electrical Technician	Lithographer Scanner Operator	Psychiatric Technician
Air Conditioning Refrigeration Mechanic	Electrician Construction	Locksmith	Public Safety Officer
Air Conditioning Mechanic Industrial	Electrician Locomotive	LVN Geriatric Specialist	Pump Plant Elec Substation Operator
Arson & Bomb Investigator Federal	Electrician Maintenance	Machine Repairer Maintenance	Quality Control Technician
Asbestos Worker	Electrician Power House	Machinist Electronic Mill & Lathe	Radiation Monitor
Auto Body Builder	Electromechanical Technician	Machinist General	Radio/Television Repairer
Auto Mechanic	Electronic Prod Line Maint Mechanic	Maintainer Waterworks	Refrigeration & Air Cond Mechanic
Automobile Tester	Electronic Technician Computer	Maintenance Machinist	Residence Counselor Alcohol
Automobile Maintenance Mechanic	Electronics Technician	Maintenance Repairer Factory	Rigger Any Industry
Automotive Parts Clerk	Embalmer	Marble Finisher	Roofer
Baker	Employment Rehabilitation Counselor	Marble Mason/Setter	Roofer Wood Shingle
Barber	Employment/Vocational Counselor	Meat Cutter Retail	Rotary Press Operator
Biomedical Equipment Technician	Engraver Pantograph	Mechanical Engineering Technician	Sanitary Health Technician
Body Repairer Bus	Equipment Mechanic	Medical Assistant	Sausage Maker
Boilerhouse Mechanic	Fire Apparatus Engineer	Metal Fabricator Precision	Scaffold and Shoring Erector
Boilermaker Field Construction Repair	Fire Department Training Officer	Metal Polisher & Buffer	Senior Nuclear Control Operator
Bookbinder	Fire Engineer	Metalfforming Prg Tool Die Maker	Sheet Metal Worker
Bookkeeper	Fire Fighter	Meter Mechanic	Sheet Metal Worker ENGYMCTECH
Brazing Machine Setter	Fire Fighter II	Mfg Development Technician	Shoe Repairer
Bricklayer	Fire Inspector	Mill & Cabinet Maker	Sign and Pictorial Painter
Broiler Cook	Fire Marshall	Millwright	Sound Technician
Building Insulating Carpenter	Fire Medic	Mobile Vertical/Horizontal Drilling	Sprinkler Fitter
Building Maintenance Engineer	Fire Officer	Model Maker	State Park Ranger
Cable Splicer	Fire Prevention Officer	Model Maker Aircraft	State Park Ranger Life Guard
Carpenter	Firebrick Refractory Tile Repairer	Mold Maker	Stationary Engineer
Carpenter Maintenance	Firefighter Paramedic	Mold Maker Glass	Steam Fitter
Carpet Layer	Fireproofing Plasterer	Molder and Coremaker	Steel Fabricator
Carpet Linoleum Soft Tile Lay	Fitter	Neon Sign Electrician	Surveyor Assistant Instrument
Casework Specialist CYA	Floor Layer Hardwood	Neon Sign Servicer	Taper
CDC Parole Agent	Gas Engine Mechanic	Numerical Control Machine Operator	Template Maker
Cement Mason	Gas Governor Repairer	Office Machines Mechanic	Terrazzo Finisher
Chemistry Radiation Prot Technician	Gas Plant Repairer	Optical Technician Surfacar	Terrazzo Worker
Child Development Associate	General Construction Welder	Painter	Testing Regulating Technician
Civil Maintenance Worker	Glazier Construction	Painter Auto	Tile Finisher
Cleaner Pointer Caulker	Group Worker	Painter Brush	Tile Machine Set Up Operator
Compositor	Hazardous Material Technician	Painter Decorator & Paperhanger	Tile Setter
Computer Peripheral Operator Prog	Hazardous Waste Material Technician	Painter Maintenance	Tool Cutter Grinder
Computer Programmer	Heat Treater	Paralegal Assistant	Tool Maker
Construction Craft Laborer	Heavy Duty Repairman	Paramedic	Tool Maker Machinist
Construction Equipment Mechanic	Hydroelectric Machinery Mechanic	Pastry Cook	Tractor Mechanic
Construction Equipment Operator	Industrial Sheet Metal Worker	Patrol Officer	Traffic Officer
Correctional Counselor	Inspector Tooling Aircraft	Patternmaker Wood	Transportation System Electrician
Correctional Monitor	Instrument Repairer	PBX Installer	Treatment Plant Mechanic
Correctional Officer	Insulating Carpenter	Photoengraver	Tree Trimmer
Cosmetologist	Iron Worker Reinforcing	Pile Driver Operator	Trolley Service Mechanic Wayside
Crane Operator	Iron Worker Structural	Pipefitter	Truck Mechanic
Culinarian	Jig & Fixture	Plant Equipment Operator	Tune Up Mechanic
CYA Parole Agent	Landscape & Irrigation Fitter	Plant Operator	Underground Construction
Decking Siding & Metal Bldg Specialist	Landscape Gardener	Plasterer	Upholsterer Auto
Dental Technician	Lather	Plastics Extrusion Technician	Upholsterer Furniture
Deputy Sheriff	Lawn Sprinkler Irrigation Installer	Plate Printer	Upholsterer Repairer
Die Caster	Line Erector	Platen Press Operator	Utility Electrician Sub Station
Diesel Mechanic	Line Maintainer	Plumber	Utility Pipeline Installer
Drafter Architectural	Lineman Elect Locomotive	Plumber Maintenance	Vocational Nurse
Drafter Assistant	Linoleum Soft Tile Layer	Plumber Residential	Water Systems Servicer
Drafter Engineering	Litho Artist	Police Officer I	WEB Press Operator
Dredge Operator	Litho Photographer	Power House Operator Hydro Electric	Welder Combination
Dry Cleaner All Around	Litho Plate Maker	Power-Reactor Operator	Wildland Fire Fighter
Drywall/Lather	Litho Press Feeder	Precision Maintenance Mechanic	Wire Electrical Discharge Machinist
Electric Distribution Checker	Litho Press Operator	Precision Spring Maker Punch Press	Youth Counselor
Electric Meter Repairer	Litho Stripper		



**California Division
of Apprenticeship Standards
Regional Offices:**

Fresno	(559) 445-5431	San Diego	(619) 767-2045
Los Angeles	(213) 576-7750	San Francisco	(415) 703-4920
Oakland	(510) 622-3259	San Jose	(408) 277-1273
Sacramento	(916) 263-2877	Santa Ana	(714) 558-4126



APPRENTICESHIP

- apprentice
- employer
- training program sponsor
- local education agency