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V.I.E.W., VOCATIONAL INFORMATION FOR EDUCATION AND WORK.

UTAH RESEARCH COORD. UNIT FOR VOCAT.AND TECH.EDUC.

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DESCRIPTORS- \*OCCUPATIONAL INFORMATION, \*OCCUPATIONS,  
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ENVIRONMENT, SALARIES, \*EMPLOYMENT OPPORTUNITIES, UTAH,

THE PURPOSE OF THIS VOLUME IS TO PROVIDE A READILY  
ACCESSIBLE SOURCE OF VOCATIONAL INFORMATION WHICH ACQUAINTS  
THE HIGH SCHOOL STUDENT WITH A WIDE VARIETY OF JOBS AVAILABLE  
IN UTAH, GIVES BASIC INFORMATION ABOUT A GIVEN JOB, AND IS  
EASILY READ. THE 121 JOB DESCRIPTIONS ARE ARRANGED  
ALPHABETICALLY, ARE IN OUTLINE FORM, AND CONTAIN INFORMATION  
ABOUT JOB DUTIES, APTITUDES NEEDED FOR SUCCESS IN THE  
OCCUPATION, HIGH SCHOOL SUBJECTS NEEDED, SALARIES EXPECTED,  
WORKING CONDITIONS, LOCATIONS IN UTAH WHERE MOST WORKERS ARE  
EMPLOYED, NUMBER OF WORKERS PRESENTLY IN THE FIELD, NUMBER OF  
WORKERS NEEDED IN THE FUTURE, AND ADVANCEMENT PROSPECTS. (PS)

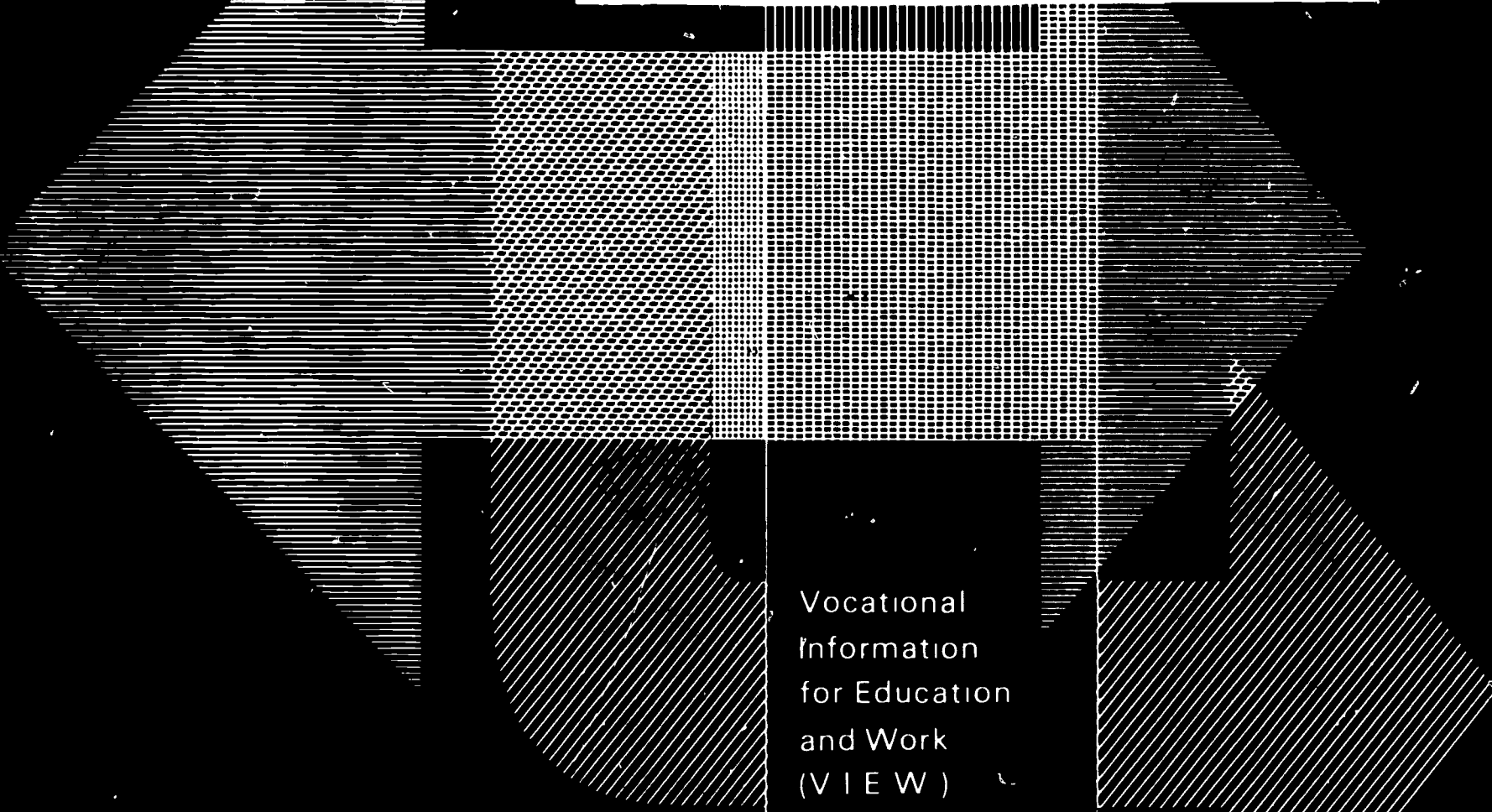
EDUC 1033

# VIEW

FINAL REPORT  
PA 08  
BR 6-3046  
DEC-4-7-063046-1612

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE  
OFFICE OF EDUCATION

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Vocational  
Information  
for Education  
and Work  
(VIEW)

Utah State Board  
of Education  
Research  
Coordinating  
Unit

EDUC 1033

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## INTRODUCTION

This volume has been prepared cooperatively by the Research Coordinating Unit of the Utah State Board of Education and by the Utah State Department of Employment Security. It contains information about available jobs in Utah which do not require a college degree. At the present time there are 121 job descriptions listed. Nearly all of the vocations in Utah, which do not require a degree and which employ a substantial number of individuals, are represented.

Each job description is in outline form and contains information about job duties, aptitudes needed for success in the occupation, high school subjects needed, salaries expected, working conditions, locations in Utah where most workers are employed, number of workers presently in the field, number of workers needed in the future, and advancement prospects.

The purpose of this volume is to provide a readily accessible source of vocational information for high school students which acquaints the student with a wide variety of jobs available in Utah, is easily read, and gives basic information about a given job. It is hoped that this objective will be accomplished through the use of this volume by counselors and teachers as a vocational tool. It has been written in outline form so that a student may quickly and easily obtain any desired information about a given job without having to read a massive amount of material.

Copies of this document are also being distributed to elementary schools. It is believed that it will provide a valuable source of information for teachers as they seek to acquaint children with the world of work and related topics which are important to elementary school children.

Vocational Information for Education and Work is still in its preliminary form and will be corrected, edited, and updated in the immediate future. Any suggestions for improvement will be appreciated, and should be forwarded to:

John F. Stephens, Director  
Utah Research Coordinating Unit  
1300 University Club Building  
Salt Lake City, Utah 84111

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YOU ARE AN AIR CONDITIONING  
AND REFRIGERATION MECHANIC

WHAT DO AIR CONDITIONING AND REFRIGERATION MECHANICS DO?

THEY INSTALL AIR CONDITIONING AND REFRIGERATION EQUIPMENT IN HOMES, OFFICES, STORES, RESTAURANTS, BUILDINGS, FACTORIES AND OTHER ESTABLISHMENTS BY:

1. Working from blueprints to install air conditioning systems in large buildings and factories
2. Putting the motors, compressors, condensers, evaporators, and other parts in their correct places as designed
3. Measuring and cutting pipe
4. Connecting all pipes and air ducts that are part of the system to the air conditioning unit
5. Putting the proper cooling liquid into the system, then checking it to see that it operates correctly
6. Adjusting the safety controls, those that measure out the liquid, and any others to make the equipment as efficient as possible
7. Installing small self-contained air conditioning units in homes and offices following diagrams prepared beforehand on where and how to make the installation

THEY REPAIR AIR CONDITIONING AND REFRIGERATION EQUIPMENT BY:

1. Cleaning and lubricating the equipment, putting in a fresh supply of cooling liquid, adjusting the control valves, and examining the equipment for any defects
2. Finding the trouble area when equipment breaks down and replacing the defective parts



WHAT SHOULD AIR CONDITIONING AND REFRIGERATION MECHANICS BE LIKE?

**THEY SHOULD BE:**

1. In good physical condition
2. Persistent
3. Accurate

**THEY SHOULD HAVE:**

1. Normal vision and hearing
2. Mechanical ability
3. A knowledge of electricity

**THEY SHOULD BE ABLE TO:**

1. Handle and lift heavy equipment
2. Reach, lift, stoop, pull and push
3. Use their eyes in close work
4. Read blueprints
5. Work in awkward or cramped positions for extended periods of time
6. Find electrical and mechanical problems quickly

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are machine shop practice, shop, electricity, welding, mechanical drawing, physics, and mathematics.

**AFTER HIGH SCHOOL:**

1. A good way to train for this job is as an apprentice. As an apprentice, you will be trained on the job under the supervision of a qualified worker in addition to receiving some classroom instruction. After a five-year training period you must pass an examination to become a journeyman or fully qualified worker.
2. Many workers do not train as apprentices but work as helpers. Opportunities for helpers are not as good as for journeymen.
3. Many employers prefer to hire persons who have had additional schooling. Their opportunities for advancement are also better. Utah Trade Tech., in Provo, offers a two-year course in this field. Utah Trade Tech., in Salt Lake, offers courses in connection with the apprenticeship program.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, air conditioning and refrigeration mechanics earned from \$3.00 to \$4.50 an hour depending upon the type of work they performed and their status. Workers in the construction industry earned more an hour than those doing maintenance work but didn't work as many weeks a year. Helpers earned less than journeymen.
2. The beginning salary for helpers was from \$1.25 to \$2.00 an hour.
3. The beginning salary for apprentices was from \$1.50 to \$2.25 an hour. They receive a raise approximately every six months until, at the end of their five-year apprenticeship, they make close to the full journeyman's wage.

WHAT ARE WORKING CONDITIONS LIKE?

1. Mechanics working in the construction industry may be laid off during the winter months.
2. You may do some traveling throughout the state to different construction projects.
3. You may be required, at times, to work at great heights while installing equipment or repairing it.
4. Some of the work must be done in awkward and cramped positions.
5. There is a danger of electrical shock and burns from handling chemicals and using torches.
6. You will have to do some lifting of heavy equipment which could possibly lead to muscle strain.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Most of Utah's air conditioning and refrigeration mechanics are located in the Wasatch Front area (Box Elder, Weber, Davis, Salt Lake and Utah counties).

**TYPE OF INDUSTRY:**

Construction companies, air conditioning and refrigeration contractors, and companies that manufacture and install this equipment hire many of these workers. Large factories and buildings employ many of these workers to do repair work. Some workers work for themselves making service calls.

**Vocational Information For Education and Work**

Air Conditioning and Refrigeration Mechanic - DOT Code 637.281  
(July 67)

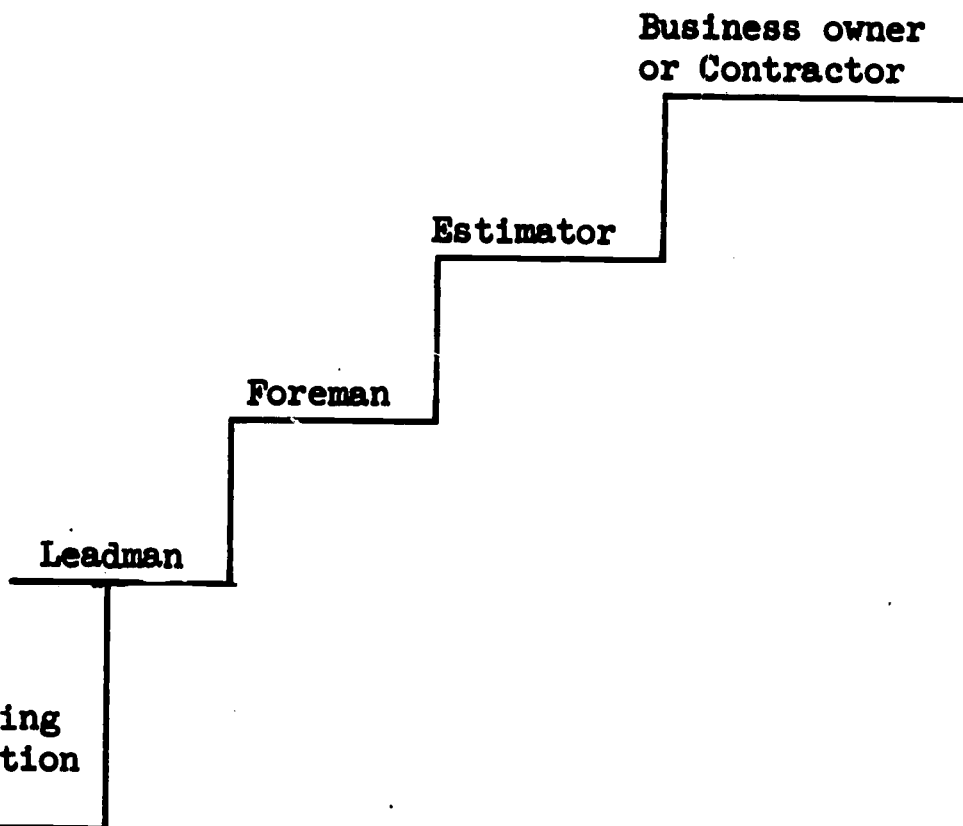
IS THERE A NEED FOR AIR CONDITIONING AND REFRIGERATION MECHANICS?

1. In 1965, there were 119 air conditioning and refrigeration mechanics in Utah. It is predicted that by 1970, this number will increase to 140.
2. The need for air conditioning and refrigeration mechanics will continue to rise due to the tremendous growth in this industry. The number of homes, offices, and buildings with air conditioning increases every year.

CAN YOU ADVANCE?



Air conditioning  
and refrigeration  
mechanic



Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security



YOU ARE AN AIRLINE STEWARDESS

WHAT DO AIRLINE STEWARDESSES DO?

THEY MAKE THE PASSENGERS' FLIGHT COMFORTABLE, SAFE, AND ENJOYABLE BY:

1. Greeting passengers as they enter the plane
2. Assisting with seating arrangements and checking tickets
3. Helping passengers with coats, hats, and traveling cases
4. Checking safety belts before takeoff
5. Explaining safety instructions to passengers at start of flight
6. Caring for infants, children, and elderly or "first time" fliers
7. Administering first aid when needed and keeping records of all minor medications given

8. Bringing magazines, newspapers, pillows, or blankets to passengers

9. Adjusting ventilating outlets, drapes, and lights

10. Calling attention to points of interest during the flight

11. Prepare and serve snacks, meals, and drinks and pick up soiled dishes and trays

THEY MAY ALSO:

1. List all lost and found articles

2. Operate music or movie systems

3. Distribute post cards

4. List departures and destinations of all passengers

5. Answer questions about the plane, airline, or schedules



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WHAT SHOULD AIRLINE STEWARDESSES BE LIKE?

## THEY SHOULD BE

1. Friendly
2. Poised
3. Tactful
4. Patient
5. Courteous
6. Tolerant
7. Attractive
8. Between 5'2" and 5'9"
9. 20-27 years old and single when hired (Some airlines will allow you to marry)
10. Good listener and conversationalist

## THEY SHOULD HAVE

1. Excellent health
2. Clear complexion
3. Straight, unblemished teeth
4. Well-groomed pleasing appearance
5. Above average intelligence
6. Maximum weight of 140 lbs.
7. 20/20 vision (some airlines allow contact lenses)

## THEY SHOULD BE ABLE TO:

1. Tolerate "sick" or irritable passengers
2. Tolerate motion of aircraft in flight
3. Stand on their feet long periods of time
4. Tolerate confinement on long flights
5. Maintain poise and balance while carrying objects
6. Get along with people

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are home economics, geography, English, speech, current events, psychology, and a foreign language.

## AFTER HIGH SCHOOL:

1. Most airlines prefer women with two years of college. Once hired, you will spend about five weeks in the airline's own school studying speech, English, hygiene, psychology, home economics, and foreign languages if you plan to fly overseas.
2. Private stewardess schools will train you, but cannot guarantee a job upon completing the course. Even with such training, most airlines would require you to complete their own training program.
3. Dixie Junior College at St. George also offers an Airline Stewardess course.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 airline stewardesses in Utah made from \$365.00 to \$525.00 a month, depending upon experience and number of hours flown.
2. Their starting salary was about \$350 per month plus additional pay for hours flown over the monthly average.
3. They receive four free trip passes per year.

WHAT ARE WORKING CONDITIONS LIKE?

1. The airline stewardess often works at night, on holidays and on weekends. Her hours are frequently long and irregular, and many nights are spent away from her home base.
2. Although she works in a neat and clean atmosphere, she is confined to the aircraft for long periods of time.
3. There is a remote possibility of a crash.

WHERE IN UTAH WILL YOU WORK?

1. Salt Lake City is the only city in Utah where you may work. As you must often be on "stand by," it is wise to live in the same city as the airport.
2. Western and Frontier are the only two airlines serving Salt Lake City which have stewardesses living in the city. Although United, Pananza, and West Coast Airlines serve Salt Lake City, their stewardesses live and fly from other cities outside of Utah.

OTHER LOCATIONS WHERE YOU MAY WORK

Most of the job opportunities are found outside of Utah. If you are working for airlines other than the two mentioned which have stewardesses living in Utah, you could expect to live in Los Angeles, San Francisco, Portland, Seattle, Denver, Chicago, or New York City. These cities are the largest bases for stewardesses.

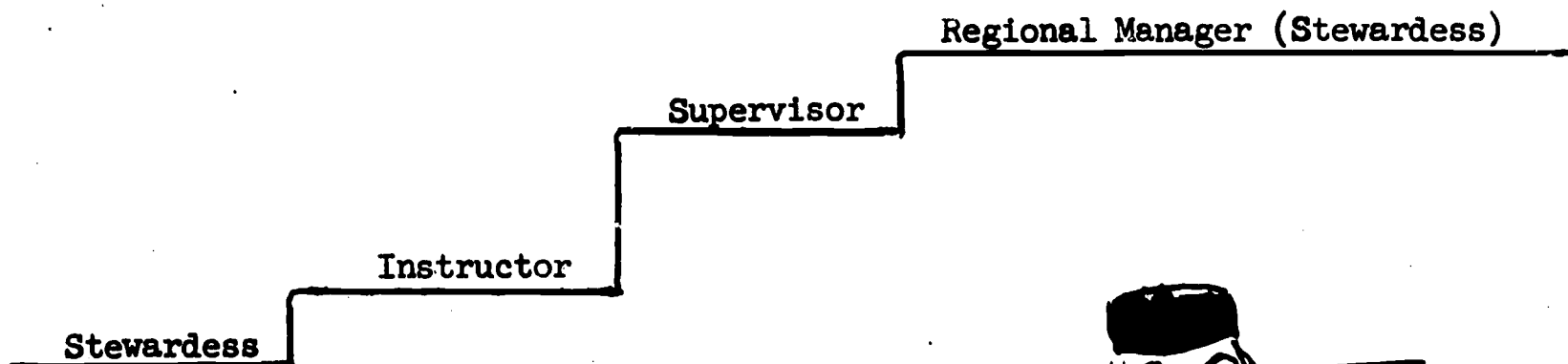
Vocational Information For Education and Work

Airline Stewardess - DOT CODE 352.878  
(July 67)

IS THERE A NEED FOR AIRLINE STEWARDESSES?

1. In 1965 there were 58 stewardesses in Utah. It is predicted that by 1970 this number will increase to 62.
2. All airlines come to Utah to hire new stewardesses.
3. There is always a demand for stewardesses because four out of ten stewardesses quit each year (usually to get married).

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE AN AIRPLANE MECHANIC****WHAT DO AIRPLANE MECHANICS DO?**

**THEY ARE RESPONSIBLE FOR KEEPING AIRPLANES OPERATING SAFELY AND EFFICIENTLY.**

**THEY PREVENT TROUBLE FROM DEVELOPING BY:**

1. Checking any faulty operations that the pilots notice
2. Inspecting all parts periodically
3. Replacing worn parts that are noticed
4. Completely disassembling the airplane engines and overhauling them after an engine has been in use for a certain period of time

**THEY REPAIR AIRPLANE PARTS BY:**

1. Removing the defective part or engine and replacing it
2. Adjusting the part so that it functions correctly
3. Testing the parts after they have been repaired
4. Installing the repaired or new part in the airplane

**THEY MAY ALSO:**

1. Perform additional duties such as warming up an engine or refueling an airplane
2. Specialize in a particular type of work such as airplane mechanic, power plant mechanic, combustion mechanic, ignition mechanic, etc.



**WHAT SHOULD AIRPLANE MECHANICS BE LIKE?****THEY SHOULD BE:**

1. Responsible
2. Precise in their work
3. Mechanically inclined
4. Ambitious

**THEY SHOULD HAVE:**

1. A concern for detail
2. Good vision
3. Good eye-hand coordination
4. Full use of both hands

**THEY SHOULD BE ABLE TO:**

1. Pay close attention to details
2. Do some strenuous work
3. Work in awkward positions
4. Tolerate dirt, grease, and noise

(For a detailed description of your capabilities, see your counselor.)

**WHAT TRAINING WILL PREPARE YOU?****IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are auto shops, shop courses, arithmetic, blue print reading, and physics.

**AFTER HIGH SCHOOL:**

1. A high school diploma is usually required.
2. The best way to prepare for this job is as an apprentice. As an apprentice you will receive on-the-job training and related classroom instruction. After four years as an apprentice you may become a fully qualified worker called a journeyman.
3. Some workers have learned this trade in the Armed Forces.
4. Some workers have obtained positions by working as helpers to airplane mechanics.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1965 the average wage for airplane mechanics in Utah was \$600 per month.
2. Their starting salary as apprentices was \$350 per month.
3. Some airplane mechanics earned as much as \$800 per month.

WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions vary greatly from job to job; some mechanics work inside well-heated and ventilated buildings while others work outside and are subject to the weather conditions.
2. Hazards include burns from hot manifolds and cuts from rough-edged metal.
3. The work can be very tiring.
4. You will often be greasy and grimy while working.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most airplane mechanics in Utah are employed in Weber and Salt Lake counties. Other opportunities may be found at airfields located throughout the state.

## TYPE OF INDUSTRY:

Hill Air Force Base in Ogden employs the majority of airplane mechanics in Utah. Major airline companies are another major employer.

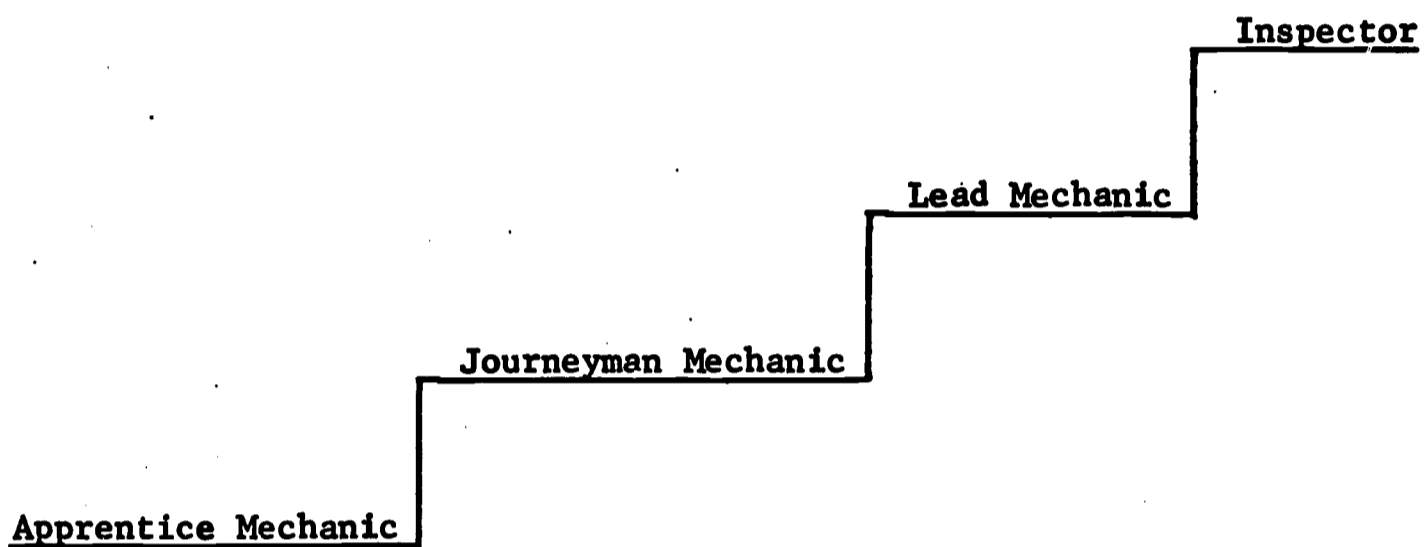
Vocational Information For Education and Work

Airplane Mechanic - DOT Code 621.281  
(July 67)

IS THERE A NEED FOR AIRPLANE MECHANICS IN UTAH?

1. In 1965 there were 290 airplane mechanics in Utah. It is predicted that by 1970 this number will increase to 305.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



Y O U   A R E   A N   I N S U L A T I O N   W O R K E R

WHAT DO INSULATION WORKERS DO?

THEY COVER PIPES, AIR DUCTS, BOILERS, TANKS, FURNACES, ROOFS, AND OTHER EQUIPMENT WITH INSULATING MATERIAL.

THEY SELECT THE TYPE OF MATERIAL TO BE USED AND DETERMINE HOW THICK IT SHOULD BE FOR A PARTICULAR OBJECT. (Materials used include asbestos, asbestos cement, cork, felt, mineral wool and fiber glass.)

THEY SECURE THE INSULATING MATERIAL IN PLACE BY:

1. Plastering it on the object, such as a boiler, and reinforcing it with cement and wire netting
2. Pasting it on with waterproof cement
3. Stapling it together around the object, such as heating equipment, and then wiring it to the object
4. Wrapping it around pipes with wires and twine
5. Gluing, pasting, and clamping prefabricated sections to heating pipes
6. Spraying it on to ceilings to help soundproof a room

WHEN NECESSARY, THEY MEASURE THE OBJECT BEING COVERED AND CUT THE MATERIAL TO FIT.

OFTEN, THEY SPREAD ASBESTOS CEMENT BETWEEN THE LAYERS OF MATERIAL, ALONG THE EDGES AND AT JOINTS, TO KEEP THE OBJECT TIGHTLY COVERED.

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WHAT SHOULD INSULATION WORKERS BE LIKE?

**THEY SHOULD BE:**

1. Mechanically inclined
2. Skillful in using their hands
3. Physically fit

**THEY SHOULD HAVE:**

1. Good finger coordination
2. The ability to use tools
3. The ability to work with numbers

**THEY SHOULD BE ABLE TO:**

1. Work in close, poorly ventilated quarters such as low ceiling tunnels and basements
2. Work in awkward positions, around boilers, furnaces and refrigeration systems
3. Climb ladders and scaffolding
4. Read blueprints
5. Stand being dirty

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are shop, industrial arts, mathematics, and science.

**AFTER HIGH SCHOOL:**

The best way to train for this job is as an apprentice.

1. As an apprentice, you will follow an outlined course of work under the supervision of a fully qualified worker who will teach you the skills you need to know.
2. After four years as an apprentice, you may become a fully qualified worker called a journeyman.
3. Some workers do not train as apprentices but work as helpers. Opportunities for helpers are not nearly as good as for journeymen.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 fully qualified journeymen in Utah made approximately \$5.02 an hour.
2. Their starting salary as an apprentice was half as much as the regular journeyman's. This salary increased each year of the apprenticeship.

WHERE IN UTAH WILL YOU WORK?

GEOGRAPHICAL LOCATION:

The great majority of Utah's insulation workers are found in the Salt Lake-Ogden-Provo area or near some large industry.

TYPE OF INDUSTRY:

1. Most insulation workers are employed in the construction industry and work for contractors who specialize in heating and cooling systems.
2. Some workers are employed in chemical plants, refineries, and other large industrial buildings that have a lot of power, heating and refrigeration equipment to repair and maintain.

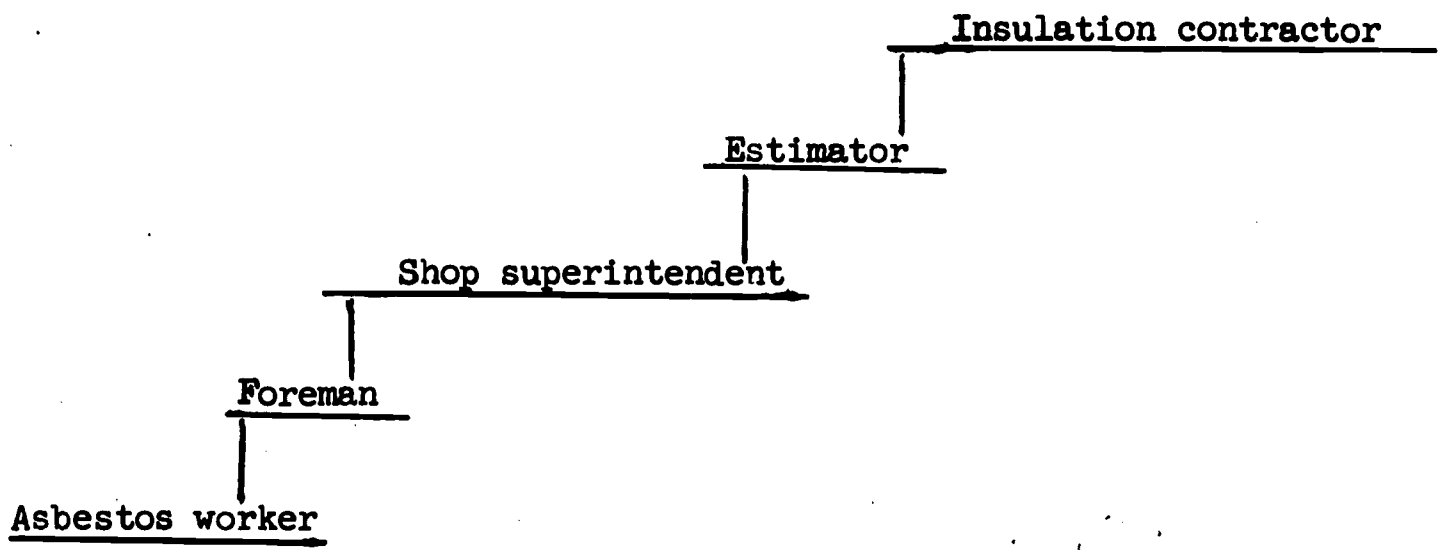
Vocational Information For Education and Work

Insulation Worker - DOT CODE 863.884  
(July 67)

IS THERE A NEED FOR INSULATION WORKERS?

- 1. In 1965 there were about 100 insulation workers in Utah. It is predicted that by 1970 this number will increase to 115.
- 2. The need for insulation workers depends largely upon the construction industry. If there is a great deal of building activity in a year, then there will be a big demand for insulation workers.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
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# YOU ARE AN AUTO MECHANIC

## WHAT DO AUTO MECHANICS DO?

THEY KEEP THE NATION'S RISING NUMBER OF AUTOMOBILES, SMALL TRUCKS, AND BUSES IN GOOD RUNNING ORDER BY:

1. Doing preventive maintenance, such as lubricating and changing oil in a car to prevent breakdowns
2. Following a "checklist" to make sure they examine all important parts of the car

THEY CORRECT ELECTRICAL AND MECHANICAL TROUBLE BY:

1. Obtaining a description of the trouble from the owners
2. Visually inspecting and listening to the motor
3. Driving the car to locate the trouble
4. Using a variety of equipment such as motor analyzers, spark plug testers, compression gauges, and electrical test meters
5. Adjusting, repairing, or replacing defective parts after the trouble spot is located

SOME AUTO MECHANICS SPECIALIZE IN A PARTICULAR AREA:

1. Automatic transmission specialists repair and replace parts in automatic transmissions.
2. Tune up men are skilled in using test equipment to locate problems in fuel and ignition systems.
3. Front end mechanics align and balance wheels and make repairs on steering mechanisms and suspension systems.
4. Other specialists may work with brakes, radiators, glass, air conditioning, and other parts.

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WHAT SHOULD AUTO MECHANICS BE LIKE?

## THEY SHOULD BE:

1. Willing to work hard
2. Physically fit
3. Proud of their work
4. Honest
5. Dependable

## THEY SHOULD HAVE:

1. Mechanical ability
2. Normal vision
3. Good finger coordination
4. Good eye-hand coordination
5. A sense of responsibility

## THEY SHOULD BE ABLE TO:

1. Reach for and handle heavy equipment
2. Work in awkward positions
3. Take care of many details
4. Tolerate gas, oil, grease and dirt
5. Do strenuous work

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are auto shop, science, arithmetic, and English.

## AFTER HIGH SCHOOL:

1. Most employers require at least a high school diploma.
2. Utah Trade Tech. in Salt Lake and Provo offer two year courses in auto mechanics. Employers prefer to hire graduates of these courses and will usually pay them more.
3. Many auto mechanics begin as helpers and advance as they gain experience.
4. Some auto mechanics begin by training as apprentices. They receive on-the-job training and related classroom instruction. After three to four years as apprentices they become fully qualified workers called journeymen.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for auto mechanics in Utah was \$125 per week.
2. Their starting salary as helpers was \$60 per week.
3. Some auto mechanics made as much as \$150 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Work areas vary from large, well-lighted, well-ventilated shops to small, poorly-lighted, poorly-ventilated shops.
2. Most auto mechanics work indoors.
3. Hazards include cuts and bruises to hands and fingers from working with engine parts in confined spaces.
4. Most engines are dirty and greasy and you will often have gas, oil, grease, and dirt on your hands, arms, face, and clothes.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

About 75% of Utah's auto mechanics work in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake, and Utah Counties. The remainder work in cities throughout the state.

**TYPE OF INDUSTRY:**

Service departments of new and used car dealers employ about one-third of Utah's auto mechanics. Another third are employed in repair shops which do general repairs or specialize in a particular area. The balance of Utah's auto mechanics work in gas stations and on construction projects.

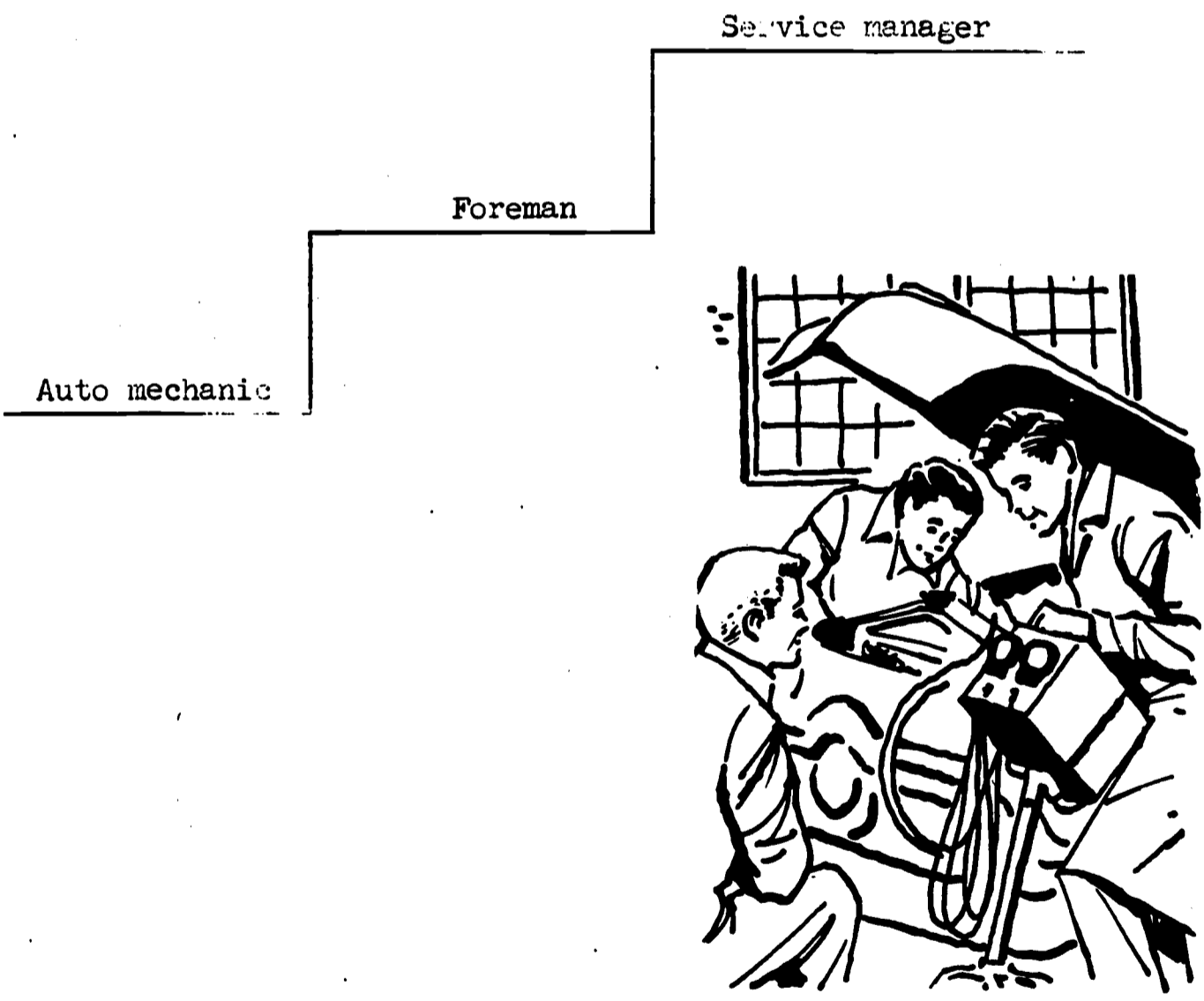
**Vocational Information For Education and Work**

Auto Mechanic - DOT Code 620.281  
(July 67)

IS THERE A NEED FOR AUTO MECHANICS?

- 1. In 1965 there were 2,200 auto mechanics in Utah. It is predicted that by 1970 this number will increase to 2,600.
- 2. The need for auto mechanics is expected to continue to rise as more and more cars are produced.
- 3. The demand for specializes will rise as automobiles become more complex.

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## YOU ARE A BAKER

There are two kinds of bakers in Utah. The "all-around-baker" is one who does all of the jobs of a baker from dough mixing to frosting and who usually works in a small neighborhood or rural community bakeshop. The baker in a large bakery will specialize in only one area of the bakery. Bakers who specialize are called bench hands, dough mixers, ovenmen, or icing mixers depending upon which job they have to do.

### WHAT DO BAKERS DO?

THEY MAKE BREADS, CAKES, PIES, COOKIES, AND OTHER GOODIES BY:

1. Stirring ingredients together to make the different doughs
2. Forming the dough into the proper shapes and putting it on trays or into pans
3. Baking the dough, keeping the oven at the right temperature and humidity
4. Mixing icing and frosting to put on pastries

THEY CLEAN THEIR WORKING AREA AND ALL OF THEIR UTENSILS AT THE END OF A SHIFT OF WORK.

EQUIPMENT THEY USE INCLUDES:

1. Kettles, pans, etc.
2. Electric mixing machines
3. Measuring devices
4. Ovens
5. Frosting guns



WHAT SHOULD BAKERS BE LIKE?

## THEY SHOULD BE:

1. Artistic
2. Interested in working with their hands

## THEY SHOULD HAVE:

1. At least average intelligence
2. Average finger coordination and form and distance judgment
3. A keen sense of taste and smell
4. Extra clean personal habits

## THEY SHOULD BE ABLE TO:

1. Lift objects of about fifty pounds
2. See and read clearly
3. Understand and follow detailed instructions
4. Understand and apply the principles of baking

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, English, and home economics.

## AFTER HIGH SCHOOL:

1. Training at the post high school level is desirable. Food service courses are planned in the future at the College of Southern Utah and at the Utah Trade Technical Institute.
2. You may enter the profession as a First Year Helper. After advancing to a Second and Third Year Helper, you may advance to a fully qualified baker.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 bakers in Utah made from \$400 to \$600 a month. Most bakers working in large bakeries in Utah are members of a labor union and make union wages.
2. The starting salary for a first year helper is \$2.21 per hour. Fully trained bakers do a variety of jobs and receive varying salaries. A machine operator earns \$2.70 per hour, while an ovenman earns \$2.87.

WHAT ARE WORKING CONDITIONS LIKE?

1. You will often be close to hot ovens and quite warm despite employers' efforts to provide air conditioning.
2. You may receive minor injuries such as cuts, bruises and burns. Rigid safety regulations are enforced in a bakery.
3. Most bakers work at night.
4. The work is sometimes routine and boring.
5. Bakeries are often clean and cheery, and smell good.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

There are bakeries in almost every town in Utah. You could work just about anywhere in the state. However, most of the job opportunities are in larger towns and cities.

## TYPE OF INDUSTRY:

Bakers are hired by restaurants, hotels, hospitals, federal and state institutions, private clubs, caterers, and large and small commercial bakeries.

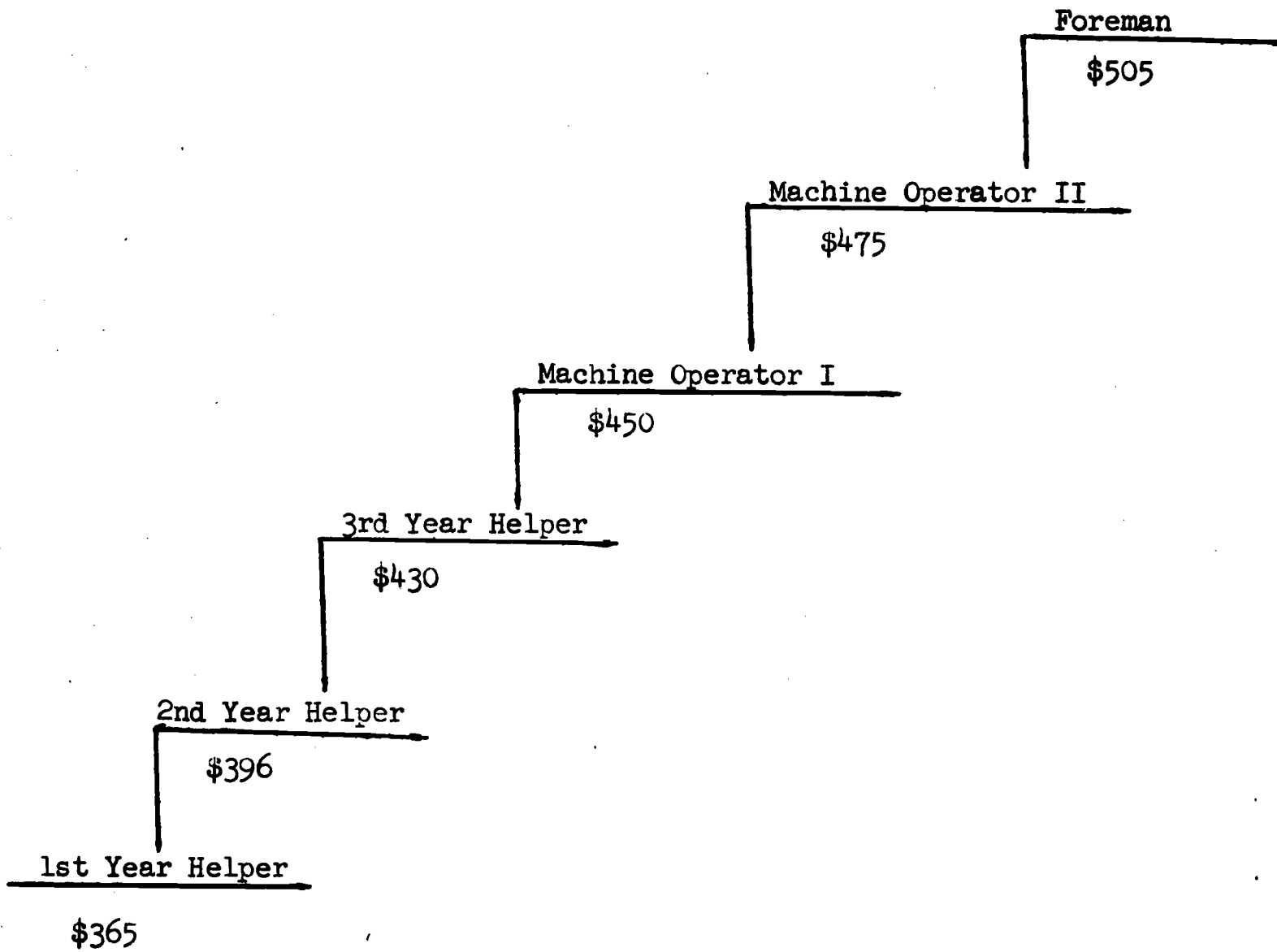
Vocational Information For Education and Work

Baker - DOT Code 526.781  
(July 67)

IS THERE A NEED FOR BAKERS?

In 1965 there were 579 bakers in Utah. It is predicted that by 1970 this number will increase to 599.

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## Y O U A R E A B A N K T E L L E R

WHAT DO BANK TELLERS DO?

THEY PAY OUT WITHDRAWALS, TAKE IN DEPOSITS, AND CASH CHECKS FOR BANK CUSTOMERS.

## THEY:

1. Count and arrange the money in their currency box before the bank opens
2. Check a person's identity before cashing his check
3. Make sure that there is enough money in an account to cover a check
4. Accept deposits, making sure that the amount of money has been added correctly on the deposit slip
5. Record deposits and withdrawals in passbooks or on a deposit receipt
6. Make sure that a customer's signature is authentic
7. Count out money and make change
8. Count the money in their currency box at the end of the day and balance their records
9. Must watch out for forgery, bad checks, and counterfeit money.

## THEY MAY ALSO:

1. Use machines to record withdrawals and deposits in the customer's passbook and the bank's records at the same time
2. Specialize in one particular type of transaction such as accepting and recording deposits made to savings accounts
3. Sort checks and deposit slips, file new account cards, and remove old ones.



WHAT SHOULD BANK TELLERS BE LIKE?

THEY SHOULD BE:

- 1. Alert
- 2. Honest
- 3. Courteous
- 4. Tactful
- 5. "Pay"tient

THEY SHOULD HAVE:

- 1. A neat appearance
- 2. A pleasant personality
- 3. An ability to work with numbers
- 4. A concern for detail

THEY SHOULD BE ABLE TO:

- 1. Stand for long periods of time
- 2. Make change quickly and accurately
- 3. Write clearly and distinctly
- 4. Work calmly under pressure
- 5. Handle money carefully
- 6. Meet the standards established by bonding companies (No police records, etc.)

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help prepare you for this job are accounting, bookkeeping, typing, mathematics, English, and business law.

AFTER HIGH SCHOOL:

- 1. You must be a high school graduate.
- 2. You will receive your training on the job.
- 3. Extra schooling at a business school, vocational school, or college in clerical work and business administration will help you find a job faster and give you a better chance for promotions.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for bank tellers in Utah was from \$2.00 - \$2.50 an hour.
2. Their beginning pay was from \$1.50 - \$2.00 an hour.
3. Some bank tellers with supervisory positions made as much as \$3.00 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Almost all banks are clean, modern, pleasant well-lighted, and well-ventilated.
2. Depending upon where you work, you may have to work evenings and Saturdays, occasionally
3. You will probably spend much of the day standing.
4. There is hardly any physical exertion required in this job.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most of Utah's bank tellers work in the Ogden-Salt Lake-Provo area. However, wherever there is a bank, there will be need of a bank teller.

## TYPE OF INDUSTRY:

Commercial banks, branch banks, and savings banks employ the majority of bank tellers.

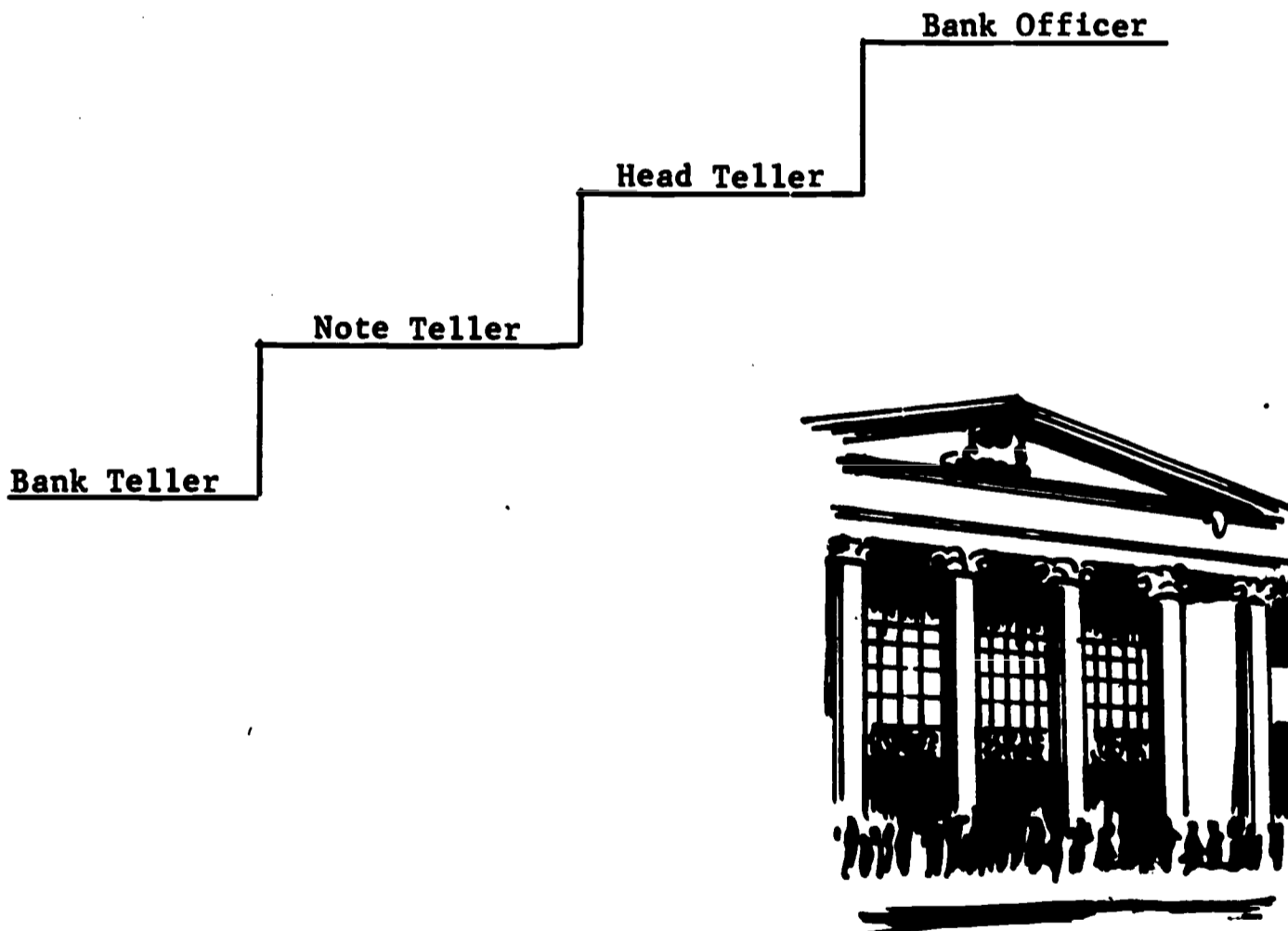
Vocational Information For Education and Work

Bank Teller - DOT Code 212.368  
(July 67)

IS THERE A NEED FOR BANK TELLERS IN UTAH?

1. In 1965, there were 869 bank tellers in Utah. It is predicted that by 1970 this number will increase to 1,025.
2. The need for bank tellers will continue to increase as banks continue to expand their operations.
3. 7 out of 10 bank tellers are women.
4. There are quite a number of part-time bank tellers.

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## YOU ARE A BARBER

### WHAT DO BARBERS DO?

THEY CUT, TRIM, TAPER, AND SHAPE HAIR ACCORDING TO THE CUSTOMER'S INSTRUCTIONS.

THEY SHAVE THE CUSTOMER'S NECK AND TRIM HIS SIDEBURNS, SOMETIMES SHAPING A MOUSTACHE OR A BEARD.

IF REQUESTED, THEY WILL:

1. Shampoo, dry, then recomb the hair
2. Apply tonics and hairdressings
3. Massage the scalp
4. Trim eyebrows

AT TIMES, THEY ALSO:

1. Give scalp treatments to help in reducing dandruff
2. Give facial or neck massages
3. Shave the customer's face
4. Dye, tint, bleach, or wave hair
5. Fit hair pieces
6. Sell cosmetic supplies

SOME BARBERS SPECIALIZE AS HAIR STYLISTS. THIS REQUIRES MORE TIME AND SKILL THAN REGULAR HAIR CUTTING BUT PAYS MORE.

THEY MUST ALSO:

1. Sweep the floor and keep their work stations clean
2. Sharpen their tools when needed and sterilize them before each usage



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WHAT SHOULD BARBERS BE LIKE?

## THEY SHOULD BE:

1. Friendly and sociable
2. Courteous and helpful
3. Willing to serve the public
4. Familiar with the latest hair styles
5. Patient with young children

## THEY SHOULD HAVE:

1. Complete use of hands, fingers and arms
2. Good finger coordination
3. Normal hearing and vision
4. Good health; no contagious diseases

## THEY SHOULD BE ABLE TO:

1. Follow the customer's instructions as to the type of haircut he wants
2. Stand for long periods of time
3. Put their customers at ease and carry on an interesting conversation with those who wish to talk

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are English, salesmanship, business, health, and physiology.

## AFTER HIGH SCHOOL:

1. To be a fully qualified barber, you must have a license. This license is awarded to you, after you do the following:
  - a. Complete 1,000 school hours at a barber college or vocational school that teaches barbering. This generally takes from six to nine months
  - b. Successfully pass a state board examination and pay a fee to obtain a one-year temporary license, called apprentice license
  - c. Practice on the job as an apprentice under the supervision of a regular barber for at least one year
  - d. Pass another examination that involves a written test and a demonstration of your knowledge for your barber's license. You must also pay a fee to take this test.
2. Barber training courses are offered at Salt Lake Trade Tech. or at one of the private barber schools in Utah.

HOW MUCH MONEY WILL YOU MAKE?

1. If you are employed by someone else you will receive a commission of approximately 65% to 75% of the money you take in, plus tips. A few barbers are paid straight salaries.
2. In 1966 barbers in Utah made from \$250 to \$600 a month, depending upon the following most important factors:
  - a. The size and location of their shop
  - b. The income level and tipping habits of their customers
  - c. The surrounding competition
  - d. The price they were able to charge
  - e. ABILITY TO ATTRACT AND HOLD REGULAR CUSTOMERS
3. Barbers who own their own shops generally have the highest income and apprentices (those who are not yet fully registered barbers), have the lowest.

WHAT ARE WORKING CONDITIONS LIKE?

1. Barber shops are, for the most part, clean and comfortable.
2. Most full-time barbers work more than forty hours a week, averaging close to fifty hours. Many keep their shops open until 7.00 p.m.
3. Work is not spread out evenly during the day. After 3.00 p.m. and on Saturdays there are generally many more customers to serve than during other periods.

WHERE IN UTAH WILL YOU WORK?

1. The Salt Lake-Ogden-Provo area provides work for the majority of Utah's barbers. However, every community with a population of around 1,000 has a barber.
2. More than half of all barbers own their own shops and usually work alone or with one other barber.
3. Barber shops are located in the downtown area, suburban shopping centers, in hotels and in office buildings.

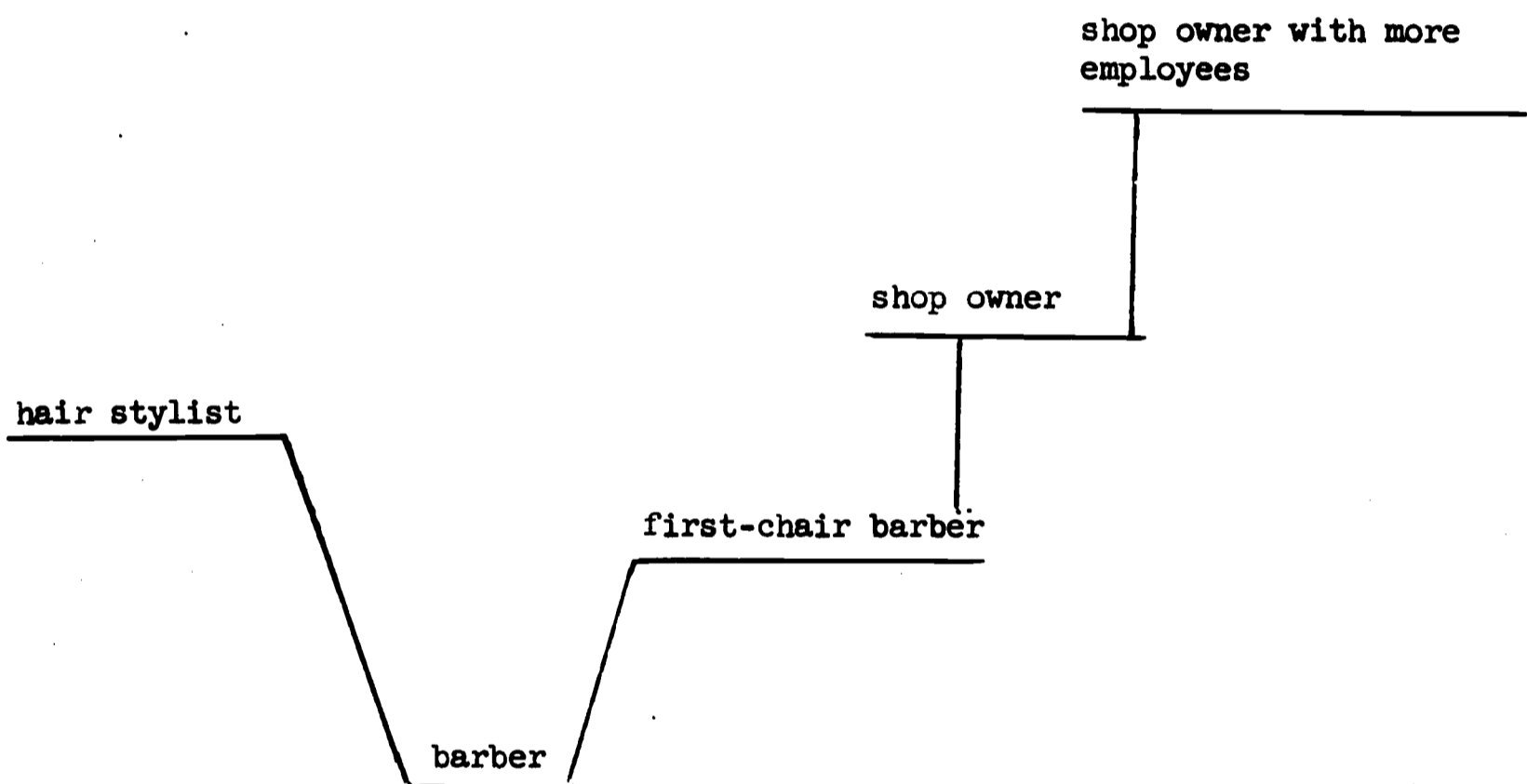
**Vocational Information For Education and Work**

Barber - DOT Code 330.371  
(July 67)

IS THERE A NEED FOR BARBERS?

1. In 1965 there were 855 barbers in Utah. It is predicted that by 1970, this number will increase to 973.
2. Even though many parents are giving "do-it-yourself" haircuts, the increased emphasis on men's hair styles will increase the need for good barbers who can keep up with the trends.

CAN YOU ADVANCE?



Prepared Cooperatively By:  
 Utah State Board of Education  
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YOU ARE A BEAUTY OPERATOR

WHAT DO BEAUTY OPERATORS DO?

THEY SHAPE AND STYLE HAIR ACCORDING TO THE CUSTOMER'S DESIRES BY:

1. Cutting and trimming hair
2. Shampooing, setting, and curling hair
3. Giving permanents
4. Combing and brushing hair, and shaping it to the desired style
5. Changing hair color by dyeing, bleaching, tinting or rinsing it.

THEY MAY ALSO:

1. Create an original hair style for the customer
2. Give scalp treatments and massages
3. Give facial packs and massages
4. Shape and dye eyebrows
5. Give manicures
6. Suggest the right type of make-up

OTHER DUTIES THEY MIGHT HAVE ARE:

1. Acting as a receptionist, answering the telephone and scheduling appointments
2. Selling and ordering supplies.



WHAT SHOULD BEAUTY OPERATORS BE LIKE?

## THEY SHOULD BE:

1. Pleasant
2. Friendly
3. Creative
4. Well-groomed
5. Patient
6. Proud of their work

## THEY SHOULD HAVE:

1. Good color perception
2. Good finger coordination
3. No skin allergies
4. Good eyesight
5. Good judgment concerning form
6. A knowledge of the latest hair styles

## THEY SHOULD BE ABLE TO:

1. Work well with others
2. Stand for long periods of time
3. Work with chemicals and dyes
4. Create the right style of hair-do for each individual customer
5. Converse well with customers
6. Keep the confidence of their customers

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are chemistry, biology, health, physiology and English.

## AFTER HIGH SCHOOL:

1. You may enroll in beauty school at age 16. However, most employees prefer someone with a high school diploma.
2. You must complete a 10 month, 1,500 hour course of study at a licensed beauty college, Salt Lake Trade Tech., the College of Eastern Utah, and Weber College all have beauty schools.
3. You must pass an examination to obtain a license to practice for one year. At the end of this year you must pass another test to get your regular license.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, beauty operators in Utah made from \$55 - \$65 a week.
2. Their starting salary was approximately \$50 a week.
3. Some made as high as from \$75 - \$85 a week.
4. Your earnings will depend upon the following important factors:
  - a. Your experience, speed, and skill
  - b. The size and location of your shop
  - c. Your ability to attract and hold regular customers
  - d. The tipping habits of your customers
  - e. The manner in which you are paid. Some beauty operators are paid on a straight commission basis but most are paid a salary plus commission.

WHAT ARE WORKING CONDITIONS LIKE?

1. Beauty shops are generally clean and comfortable.
2. Most full time operators work more than forty hours a week including some evenings and Saturdays.
3. You will spend most of the day on your feet.
4. There is a chance that some of the chemicals you work with may irritate your skin.
5. You must work with dyes and permanents that often have an unpleasant odor.
6. At times, customers may be rude and insulting.
7. This type of creative work can be very rewarding.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

1. 80% of Utah's beauty operators work in Box Elder, Davis, Weber, Salt Lake and Utah counties.
2. Beauty operators are found in most communities throughout the state. In smaller towns, they may only work part-time.

**TYPE OF INDUSTRY:**

Privately owned salons located in shopping centers, downtown areas, hotels and large apartment buildings employ the majority of beauty operators.

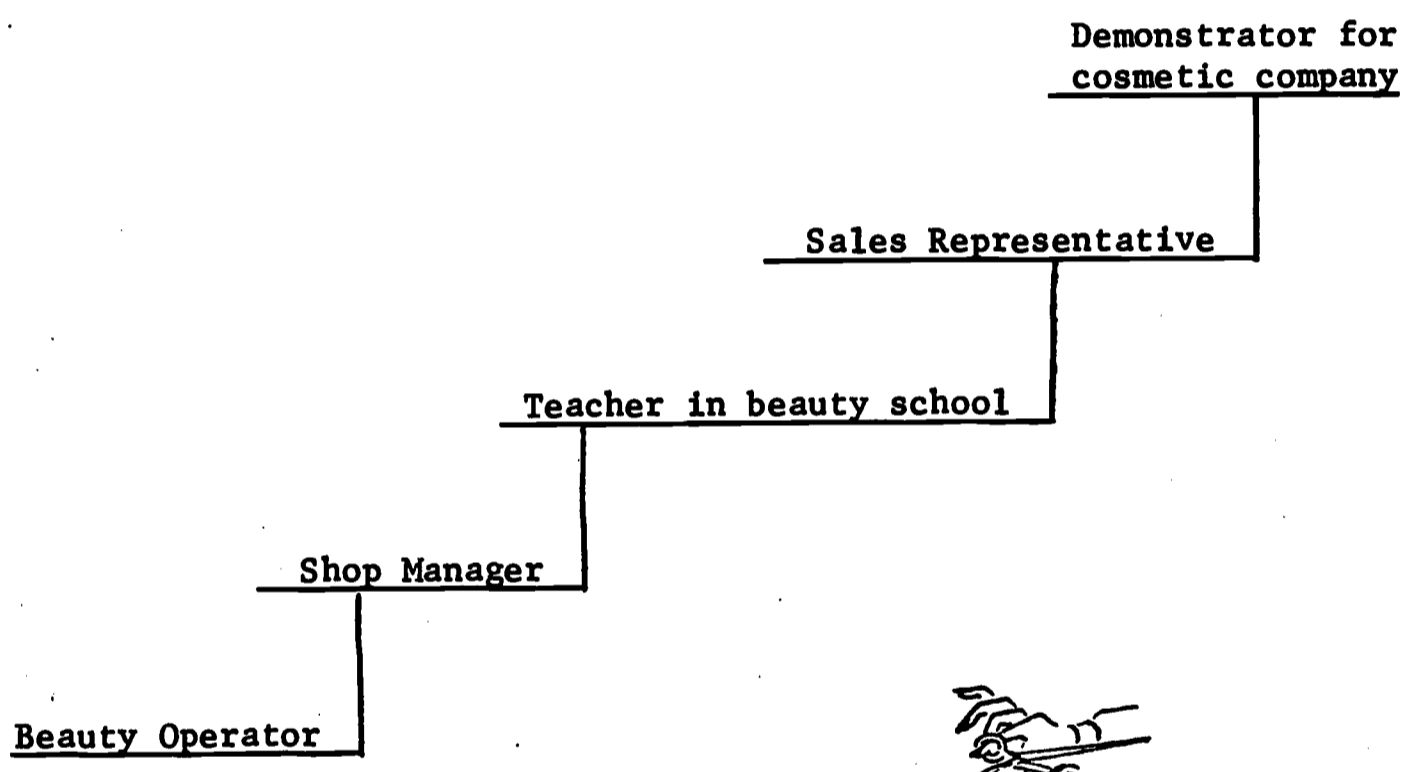
**Vocational Information For Education and Work**

Beauty Operator - DOT Code 332.271  
(July 67)

IS THERE A NEED FOR BEAUTY OPERATORS?

- 1. In 1965, there were 1,036 beauty operators in Utah. It is predicted, that by 1970, this number will increase to 1,604.
- 2. The demand for beauty operators is generally high due to a high rate of turnover. Many leave the profession to marry or raise a family.

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## YOU ARE A BLACKSMITH

### WHAT DO BLACKSMITHS DO?

THEY MAKE AND REPAIR METAL TOOLS, PARTS, AND OTHER ARTICLES.

THEY:

1. Heat metal in a special type furnace called a forge until it's glowing hot.
2. Shape the heated metal by hammering it on an anvil.
3. Hammer together pieces of heated metal.
4. Harden the metal by heating it to a high temperature, then cooling it quickly in an oil or water bath.
5. Make the metal tough and strong by heating it at a low temperature for a certain period of time, then letting it cool gradually in the air.
6. Clip or grind away rough edges and excess metal.

THEY MAY ALSO:

1. Sharpen hand and machine tools such as chisels, drills, and picks.
2. Operate heavy machinery to shape and form metal articles.
3. Do welding and shoe horses.

THE INDUSTRIAL BLACKSMITH OR HAMMERSMITH SUPERVISES THE HEATING AND SHAPING OF METAL BY A CREW OF WORKERS USING VARIOUS KINDS OF MACHINERY.

WHAT SHOULD BLACKSMITHS BE LIKE?

## THEY SHOULD BE:

1. Strong
2. Energetic
3. Mechanically inclined
4. In good condition

## THEY SHOULD HAVE:

1. Skillful hands
2. Good judgment of size and form
3. Good finger coordination
4. A good sense of touch

## THEY SHOULD BE ABLE TO:

1. Climb, stoop, bend, and reach
2. Work from drawings and blueprints
3. Do heavy work and lifting
4. Use basic arithmetic

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are metal shop, mathematics, auto mechanics, and blueprint reading.

## AFTER HIGH SCHOOL:

1. The best way to train for this job is as an apprentice. As an apprentice you will receive four years of supervised on-the-job training and related classroom instruction.
2. Some workers learn the trade on the job without following any formal training. They are known as helpers. Helpers do not advance as fast as apprentices.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the union wage for blacksmiths in industry was \$4.95 an hour.
2. The average wage for blacksmiths who worked in shops was \$3.48 an hour.
3. Helpers made about \$2.84 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Blacksmith shops tend to be hot and noisy because of furnaces and hammers.
2. There is danger of burns from forges and heated metals and cuts from handling tools and machines.
3. This work involves a lot of physical exertion.

WHERE IN UTAH WILL YOU WORK?

GEOGRAPHICAL LOCATION:

50% of Utah's blacksmiths work in the Ogden - Salt Lake - Provo area. The other 50% are located throughout the state in mining and farming communities.

TYPE OF INDUSTRY:

Steel and iron manufacturing industries and railroad, mining and construction companies employ most blacksmiths. Some blacksmiths work for themselves in their own shops.

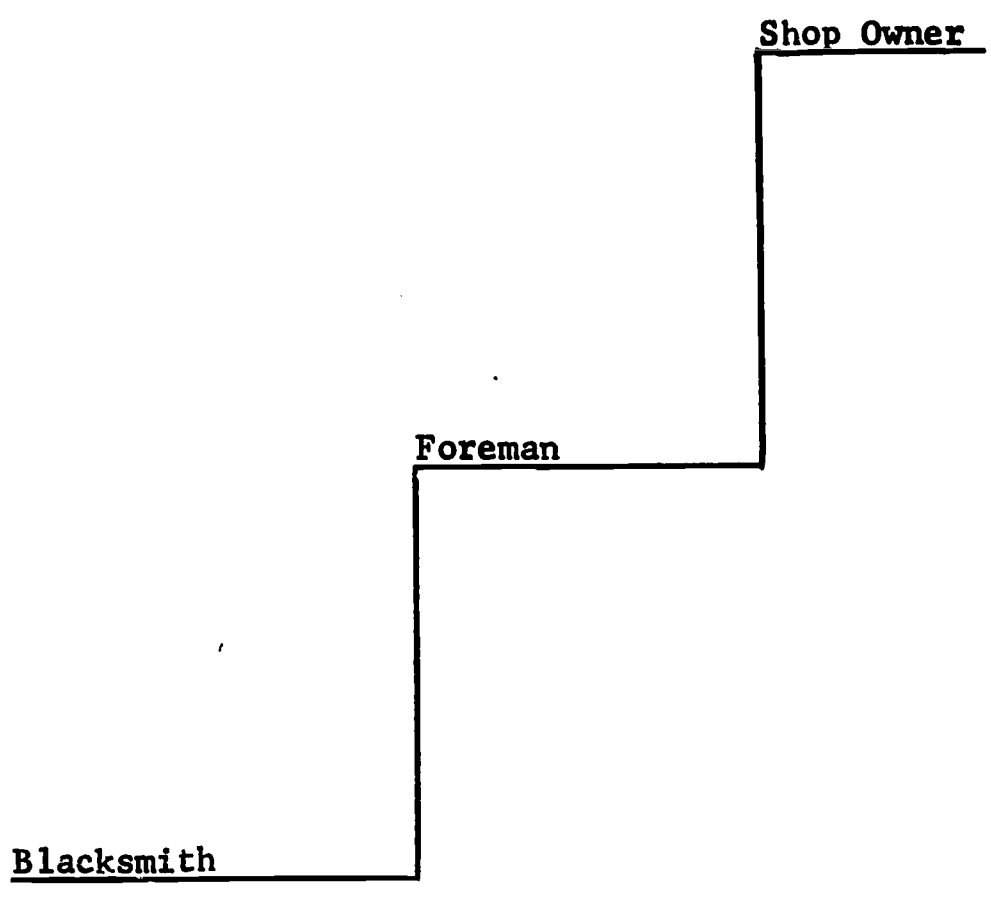
Vocational Information For Education and Work

Blacksmith -- DOT Code 610.381 (July 1967)

IS THERE A NEED FOR BLACKSMITHS IN UTAH?

- 1. In 1965 there were 70 blacksmiths in Utah. It is predicted that by 1970 this number will increase to 74.
- 2. The need for blacksmiths in construction will continue to rise as the construction industry grows. The need for blacksmiths in small shops will stay about the same.

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WHAT DO BODY AND FENDER MEN DO?

THEY REPAIR THE BODIES AND FRAMES OF DAMAGED AUTOMOBILES.

THEY:

1. Remove dents in automobile bodies and fenders by hammering one side of the dent with a metalworking hammer while holding a small metal block on the opposite side
2. Smooth the hammered area by filing, grinding, or sanding it with a disc or portable sander
3. Fill badly dented areas with solder or a plastic material, then file it until it is smooth and blends in
4. Weld breaks in the metal
5. Straighten bent frames including door and window openings using special machines
6. Replace badly damaged body parts such as fenders, metal tops, doors, and panels
7. Remove badly damaged panels with a cutting torch and weld the new ones in place
8. Reshape metal by heating it with a torch and hammering it into shape
9. Install window glass and windshields

THEY MAY ALSO:

1. Put in new upholstery
2. Paint repaired portions of cars



WHAT SHOULD BODY AND FENDER MEN BE LIKE?

## THEY SHOULD BE:

1. Artistic
2. Proud of their work
3. Willing to work hard
4. In good condition
5. Skillful in the use of their hands
6. Honest
7. Dependable

## THEY SHOULD HAVE:

1. Good judgment
2. Good eyesight
3. An eye for shape and form
4. Good finger coordination
5. Good eye-hand coordination
6. A knowledge of automobile construction
7. Mechanical ability

## THEY SHOULD BE ABLE TO:

1. Bend, stoop, reach, and lift
2. Work in awkward and cramped positions
3. Do strenuous work and lifting of heavy objects
4. Do neat and precise work
5. Decide how to do each different repair job

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, mechanical drawing, metal shop and auto mechanics.

## AFTER HIGH SCHOOL:

1. Although it is not absolutely necessary to be a high school graduate, your chances of finding work are much better if you are.
2. Utah Trade Tech., Salt Lake, offers a one-year course in auto body repair and Utah Trade Tech., Provo, offers a two-year course which includes auto body painting. Employers prefer to hire graduates of these courses and will usually pay them more.
3. Some body and fender men train as apprentices, receiving on-the-job training and classroom instruction for a period of three to four years. After passing a test, they are qualified journeymen.
4. Other body and fender men are hired as helpers and learn the trade by helping regular workers. They may gain enough experience to become regular workers in three to four years. There are more advantages, however, in training as an apprentice.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, journeymen body and fender men earned from \$3.00 to \$5.00 an hour depending upon their skill and experience.
2. Regular workers earned from \$2.25 to \$4.00 an hour depending upon their skill and experience.
3. An apprentice usually begins at about \$1.75 to \$2.25 an hour, receiving a raise each six months until he is a journeyman.
4. Helpers earned from \$1.25 to \$2.25 an hour.

Most body and fender men work on a commission basis. Those who earn the highest wages are those who are the fastest, the most skilled and the most popular with customers.

WHAT ARE WORKING CONDITIONS LIKE?

1. Work areas vary from large, well-lighted, clean, orderly shops to small, cluttered, dusty, dim shops.
2. All shops are generally quite noisy; some have an odor of paint.
3. There is danger of cuts from ragged metal and burns from hot metal and torches.
4. There is variety in this work. Each car is different and presents a different challenge to the worker.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Approximately 80% of Utah's body and fender men work in Box Elder, Weber, Davis, Salt Lake and Utah counties. Those who work in smaller towns may also be auto mechanics and painters.

## TYPE OF INDUSTRY:

Automobile dealers, service garages, body and fender specialty shops, buslines and trucking companies employ the majority of body and fender men.

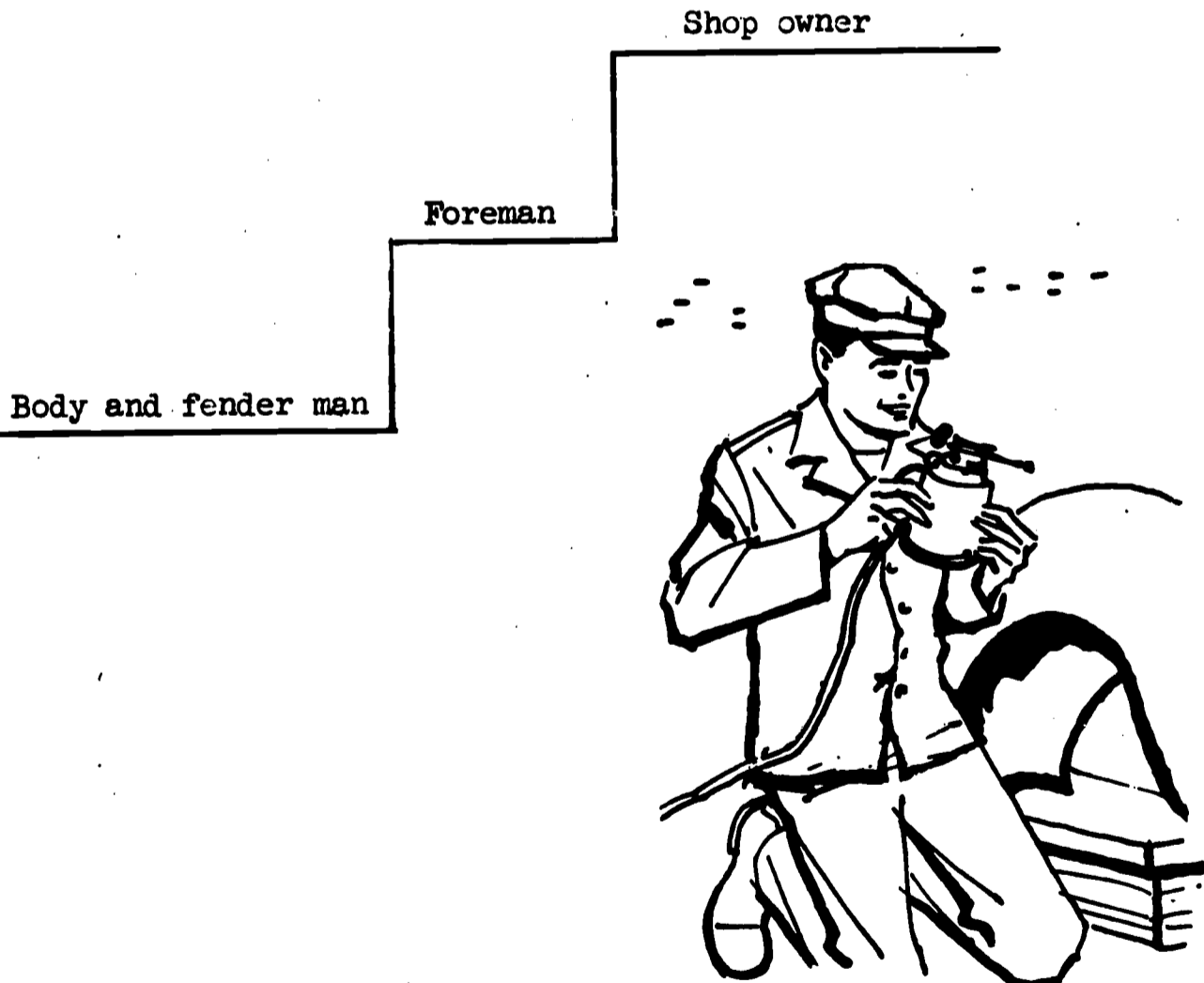
Vocational Information For Education and Work

Body and Fender Man - DOT Code 807.381  
(July 67)

IS THERE A NEED FOR BODY AND FENDER MEN IN UTAH?

1. In 1965, there were approximately 600 body and fender men in Utah. It is predicted that by 1970, this number will increase to 700.
2. The need for body and fender men will continue to rise due to the increase in the number of automobiles on the road and consequently the number of automobile accidents.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A BOILERMAKER****WHAT DO BOILERMAKERS DO?**

**THEY MAKE BOILERS, VATS, TANKS, AND OTHER LARGE VESSELS USED FOR HEATING, FROM METAL PLATE.**

**THEY:**

1. Draw lines on steel plate, using blueprints as guides, for other workers to follow while cutting the plate to size (LAYOUT MEN)
2. Cut and shape steel plate to the right size and weld or rivet it in place
3. Temporarily put the parts together, at the factory, to make sure they fit correctly and correct any mistakes they may find (FITUP MEN)

**THEY ASSEMBLE BOILERS AND OTHER HEATING VESSELS AT CONSTRUCTION SITES.**

**THEY:**

1. Put the prefabricated parts together where the boiler is to be used and connect it to the necessary pipes
2. Test the newly constructed boiler to see if all the valves, pipes, and other parts work properly

**THEY REPAIR BOILERS AND OTHER HEATING VESSELS.**

**THEY:**

1. Check the boiler for leaks and weak spots and try to determine the cause of any trouble
2. Take the boiler apart and make any necessary repairs such as patching weak spots, replacing parts, and strengthening joints

**THEY MAY ALSO PUT BOILERS TOGETHER IN FACTORIES THAT SHIP THEM OUT READY MADE.**

WHAT SHOULD BOILERMAKERS BE LIKE?

## THEY SHOULD BE:

1. Strong and in good health
2. Mechanically inclined
3. Skillful in the use of their hands

## THEY SHOULD HAVE:

1. Good hearing
2. Good finger coordination
3. Good judgment of size and distance

## THEY SHOULD BE ABLE TO:

1. Do heavy, strenuous work
2. Climb, stoop, bend, kneel, reach, and balance
3. Understand and follow technical instructions
4. Work from drawings and blueprints
5. Use basic arithmetic to solve problems

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are shop, mathematics, mechanical drawing, auto mechanics, and science.

## AFTER HIGH SCHOOL:

1. The best way to become a fully qualified boilermaker is to train for four years as an apprentice. During this time you will receive supervised on-the-job training and related classroom instruction.
2. Some workers learn the trade informally as helpers. They advance much slower than the apprentice.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the union pay for boilermakers in construction was \$5.25 an hour. However, they are frequently laid off during the winter months.
2. The average pay for a boilermaker working in a factory was \$3.48 an hour. This type of work is not seasonal and the worker works year-round.
3. Fitup men make slightly less than the boilermaker, averaging \$3.30 an hour. Layout men make slightly more, averaging \$4.00 an hour.
4. The apprentice begins at a little over half the regular salary.

WHAT ARE WORKING CONDITIONS LIKE?

1. Boilermakers working in construction and doing repair work often work at great heights and in crowded surroundings.
2. Conditions of heat, cold, dampness, and poor ventilation are common.
3. There is danger of being injured. Boilermaking is probably the most dangerous of the metalworking occupations. However, modern protective equipment and safety training programs have greatly reduced the number of accidents.
4. Boilermaking is quite a noisy occupation.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Approximately 75% of Utah's boilermakers work in the Salt Lake area. Boilermakers in construction may travel throughout the state to different construction sites.

## TYPE OF INDUSTRY:

Most of Utah's boilermakers are employed in the construction industry. Companies that make boilers, large industrial establishments, gas and oil refineries, railroad companies and gas and electric companies employ boilermakers to do assembly and repair work.

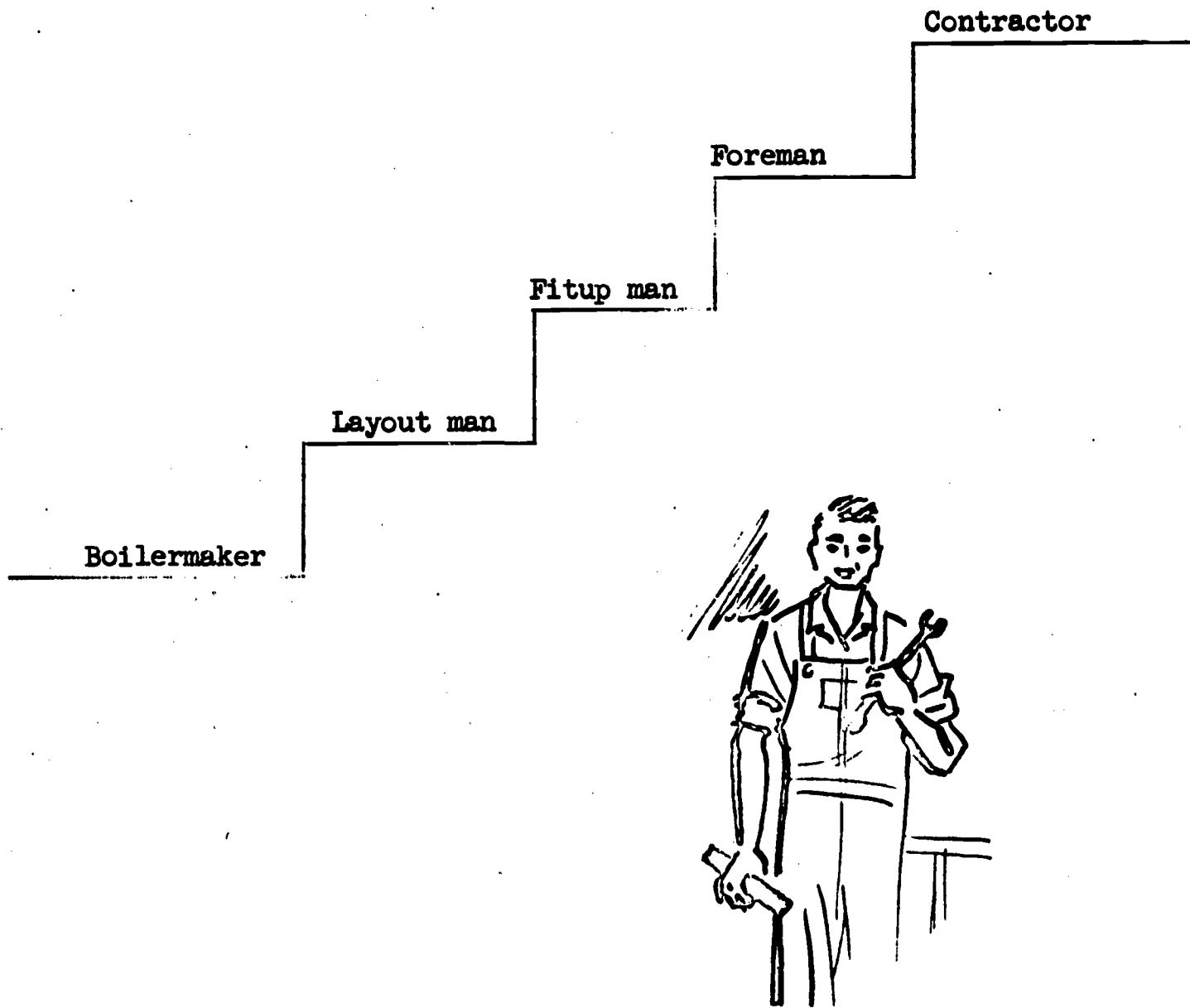
Vocational Information For Education and Work

Boilermaker - Dot Code 805.281  
(July 67)

IS THERE A NEED FOR BOILERMAKERS IN UTAH?

1. In 1965 there were 297 boilermakers in Utah. It is predicted that by 1970 this number will increase to 324.
2. The need for boilermakers will increase as the construction industry grows.

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## Y O U   A R E   A   B O O K B I N D E R

## B I N D E R Y   W O R K E R

W H A T   D O   B O O K B I N D E R S   D O ?

THEY BIND, SEW, AND STAPLE PRINTED MATERIAL SUCH AS BOOKS, MAGAZINES, PAMPHLETS, CALENDARS, ETC.

## THEY:

1. Fold the printed sheets into one or more units known as "signatures" so that the right sheets will be in the right order
2. Insert any illustrations that have been printed separately
3. Gather and assemble the signatures into proper order and sew them together
4. Shape the books with power presses and trimming machines
5. Glue fabric strips to the back of the books for support
6. Glue covers onto the book, then give it a finished appearance through different operations

THEY SET UP, MAINTAIN, AND REPAIR MACHINES AND EQUIPMENT USED IN THE ABOVE OPERATIONS.

## THEY MAY ALSO:

1. Specialize in one part of the work or in running one type of machine
2. Do cover design work and engravings

BINDERY WORKERS (also called Bindery Women) ARE GENERALLY TRAINED TO DO ONLY ONE PART OF THE PROCESS OR OPERATE ONE TYPE OF MACHINE.



WHAT SHOULD BOOKBINDERS BE LIKE?

## THEY SHOULD BE:

1. Alert
2. Artistic
3. Proud of their work
4. Mechanically inclined
5. Can be handicapped (deaf)

## THEY SHOULD HAVE:

1. Good eyesight and color vision
2. Good finger coordination
3. Full use of hands and fingers
4. Good eye-hand coordination
5. Good judgment of form

## THEY SHOULD BE ABLE TO:

1. Work rapidly and accurately with their fingers
2. Lift medium weight loads
3. Stand for long periods of time

## BINDERY WORKERS SHOULD BE ABLE TO:

1. Keep alert and pay attention to machine work that is quite repetitive
2. Stand for long periods of time doing work that may become boring
3. Work steadily and fast with their hands

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, English, printing, art, and shop courses.

## AFTER HIGH SCHOOL:

1. A four or five year apprenticeship which includes on-the-job training as well as classroom instruction is required to become a skilled bookbinder.
2. Bindery workers may train for two months on the job or may sign up for a two-year apprenticeship program which includes supervised training and classroom instruction.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for bookbinders was from \$3.50 - \$4.00 an hour.
2. The beginning wage for apprentices was from \$1.75 - \$2.00 an hour.
3. Bindery workers earned from \$1.75 - \$2.50 an hour depending upon their training and skill.

WHAT ARE WORKING CONDITIONS LIKE?

1. You will be working in factory-like surroundings around machinery that makes a fair amount of noise.
2. There is some danger of hand and finger injuries from cutting, stapling, and sewing machines, as well as paper cuts.
3. Your work may become monotonous at times (not so much for the book-binder as for the bindery worker).
4. Most binderies are well-lighted and well-ventilated. Some will be small and cluttered, others large and well arranged.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most of Utah's bookbinders and bindery workers are employed in the Ogden-Salt Lake-Provo area.

## TYPE OF INDUSTRY:

Commercial printing firms, book publishing firms, manufacturers of business forms, libraries, and independent bookbinderies hire the majority of bookbinders and bindery workers.

Vocational Information For Education and Work

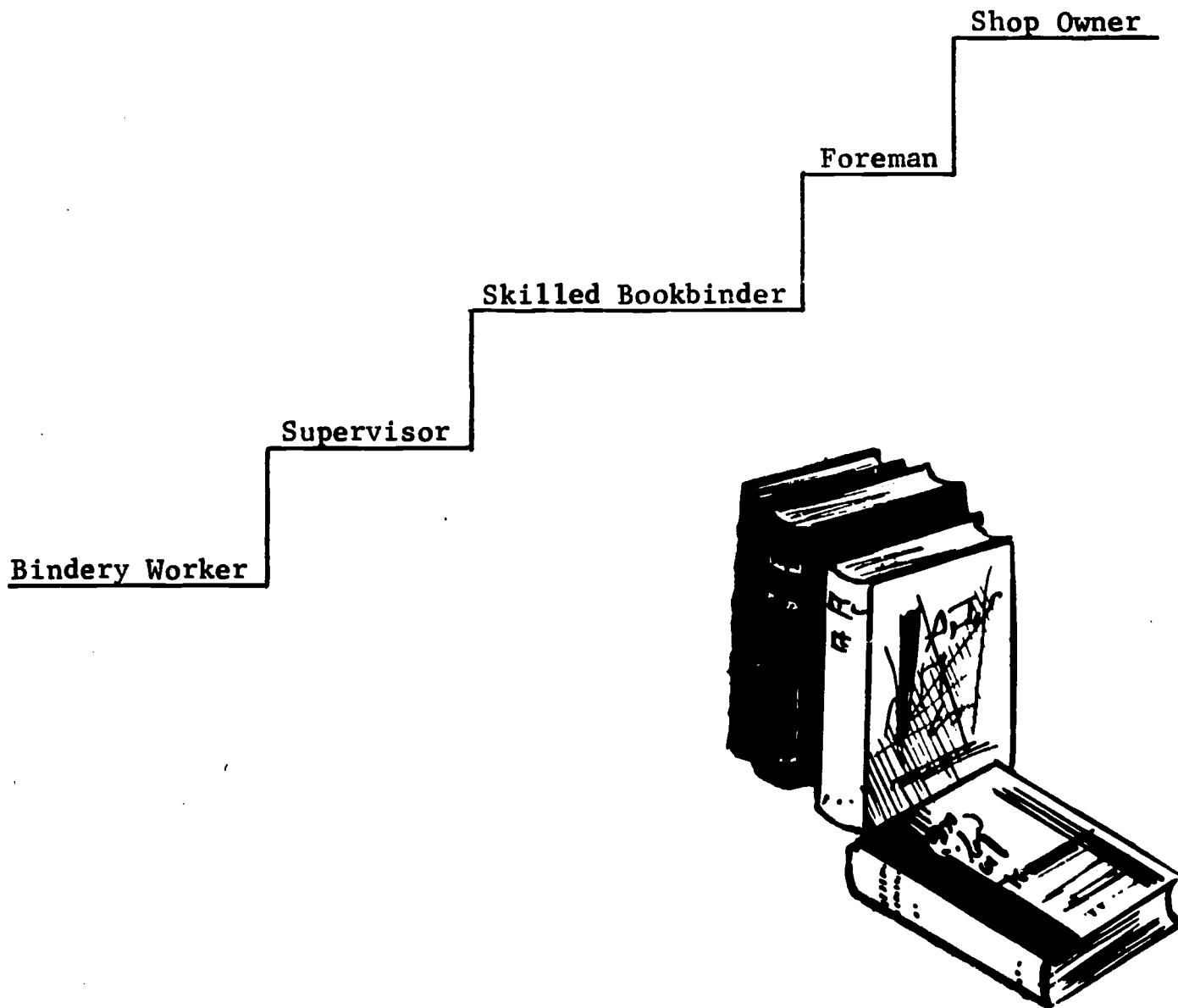
Bookbinder - DOT Code 977.884

(July 67)

IS THERE A NEED FOR BOOKBINDERS IN UTAH?

1. In 1965, there were 171 bookbinders in Utah. It is predicted that by 1970, this number will increase to 210.
2. The need for bookbinders will increase because of a growth in the printing industry and its uses.
3. Most bindery workers are women.

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## YOU ARE A BOOKKEEPER

WHAT DO BOOKKEEPERS DO?

THEY KEEP UP-TO-DATE RECORDS OF A BUSINESS' FINANCIAL AFFAIRS.

1. They record day-to-day business transactions in journals and ledgers and on other accounting forms.
2. They prepare financial statements for their employers.

THEY MAY ALSO PERFORM MANY OTHER DUTIES SUCH AS:

1. Operating calculating machines of various types
2. Operating bookkeeping machines
3. Handling payroll, calculating employee wages from time cards, and preparing payroll checks
4. Computing monthly statements to customers
5. Preparing tax reports such as withholding, Social Security, and other taxes

THERE ARE SPECIAL REQUIREMENTS FOR BOOKKEEPERS SUCH AS:

1. They must be bondable (a bond is insurance against possible misconduct in the line of work such as forgery, theft, and falsifying reports). A bond is taken out by the employer as a protection for him and his company.
2. They must have character references for most jobs.

WHAT SHOULD BOOKKEEPERS BE LIKE?

## THEY SHOULD BE

1. Dependable
2. Honest
3. Cooperative

NOTE: The job of Bookkeeper is excellent for someone who is paralyzed from the waist down, or is otherwise confined to a sitting position.

## THEY SHOULD HAVE:

1. Memory for detail
2. Concern for detail
3. Normal use of hands and arms
4. Integrity
5. Initiative
6. Normal finger movement ability

## THEY SHOULD BE ABLE TO:

1. Work rapidly and accurately
2. Use basic arithmetic
3. Do routine work for long periods of time

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are business courses, English and mathematics.

## AFTER HIGH SCHOOL:

1. Some employers will hire a high school graduate for entry positions as a bookkeeper, but your chances for a good job are much better if you take some additional training in college, business school, or vocational school.
2. There are business and vocational schools located in Logan, Ogden, Salt Lake City, Provo, Ephraim, Price, Cedar City, and St. George which offer bookkeeping, office and business practice courses.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 bookkeepers in Utah averaged \$112.00 per week.
2. Their starting salary was about \$90.00 per week.
3. Some made as high as \$140.00 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. You will sit at a desk most of the day.
2. You work under conditions of frequent interruption.
3. You may be surrounded by noise from other office machines.
4. The bookkeeping office is generally a well-lighted pleasant place to work.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Opportunities for employment are greater in large cities where more businesses are located. Almost any town will have need of a bookkeeper somewhere, but jobs of this type are more numerous in the larger towns.

**TYPE OF INDUSTRY:**

Banks, insurance firms, large manufacturing companies, department stores, and some large government offices employ the majority of bookkeepers. Many large corporations are doing a great deal of their bookkeeping with computers.

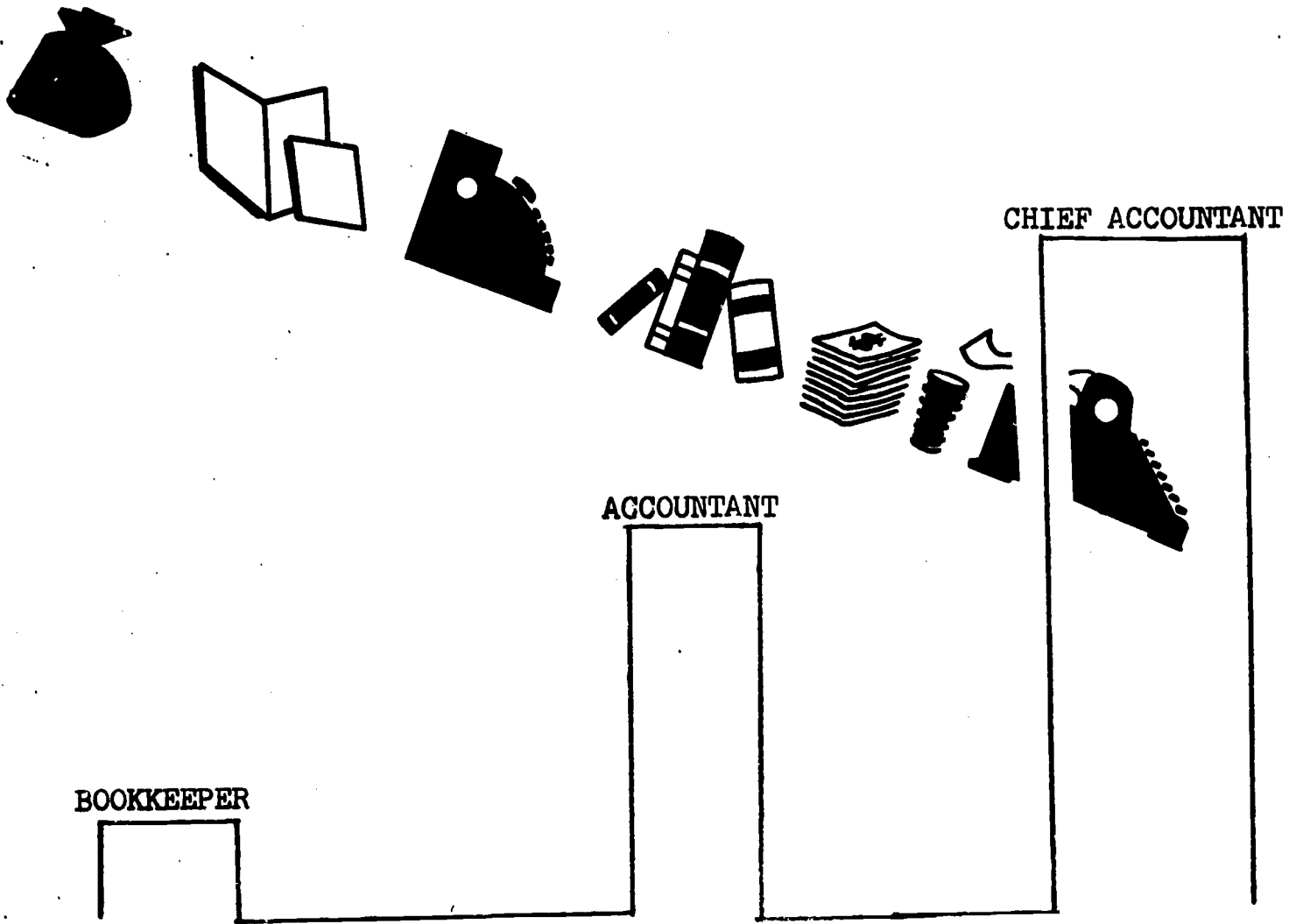
**Vocational Information For Education and Work**

Bookkeeper - DOT CODE 210.388  
(July 67)

IS THERE A NEED FOR BOOKKEEPERS?

In 1965 there were 4,845 bookkeepers in Utah. It is predicted that by 1970 this number will increase to 5,735.

CAN YOU ADVANCE?



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YOU ARE A BOOKKEEPING MACHINE OPERATOR

WHAT DO BOOKKEEPING MACHINE OPERATORS DO?

THEY KEEP DAILY BUSINESS RECORDS USING A BOOKKEEPING MACHINE.

THEY:

1. Sort out information to be recorded, such as:
  - a. Money paid to and by the company
  - b. Money owed to and by the company
  - c. Merchandise shipped to and from the company
  - d. Items purchased and sold
2. Record information on different cards and forms, by placing them in the machine and pressing the correct keys
3. Total the different accounts and check to see that the books balance

THEY MAY ALSO:

1. Calculate employee wages and prepare the payroll
2. Prepare customers' monthly statements
3. Calculate withholding, social security, and other taxes
4. Do typing
5. Use other machines such as adding and calculating machines



WHAT SHOULD BOOKKEEPING MACHINE OPERATORS BE LIKE?

## THEY SHOULD BE:

1. Neat
2. Accurate
3. Fast
4. Punctual
5. Dependable
6. Honest

## THEY SHOULD HAVE:

1. Good eyesight
2. Good eye-hand coordination
3. Good finger coordination
4. Full use of both hands and arms
5. Clerical aptitude

## THEY SHOULD BE ABLE TO:

1. Concentrate on their work for long periods of time
2. Work alone
3. Sit for long hours using fingers of one or both hands
4. Tolerate machine noises
5. Use basic arithmetic
6. Do typing

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are bookkeeping, mathematics, typing, business English, and business law.

## AFTER HIGH SCHOOL:

1. Employers will hire high school graduates who have had a high school training course in bookkeeping and train them on the job. They generally start at a lower wage rate than operators who have had additional schooling.
2. Most employers prefer to hire operators who have been trained by a college or school of business and who have had some clerical experience. Business schools and colleges that offer bookkeeping machine training are located in Logan, Ogden, Salt Lake City, Provo, Ephraim, Price, Cedar City, and St. George.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average salary for bookkeeping machine operators in Utah was \$2.15 an hour.
2. Their beginning salary was from \$1.25-\$1.60 an hour, depending upon the amount of training they had received.
3. Some experienced operators made \$2.35 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. You probably will be part of a large office staff consisting of other office machine operators and clerks.
2. The office is generally pleasant, well-lighted and well-ventilated.
3. The work is not physically hard but can become quite routine.
4. There is continual noise from the bookkeeping and surrounding office machines.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

You could work anywhere in Utah that has the type of industry listed below. Most opportunities are found in large cities since small businesses do not have need of a bookkeeping machine.

## TYPE OF INDUSTRY:

Banks, insurance companies, large department stores, large manufacturing firms, government agencies, and public utilities employ the majority of bookkeeping machine operators.

Vocational Information For Education and Work

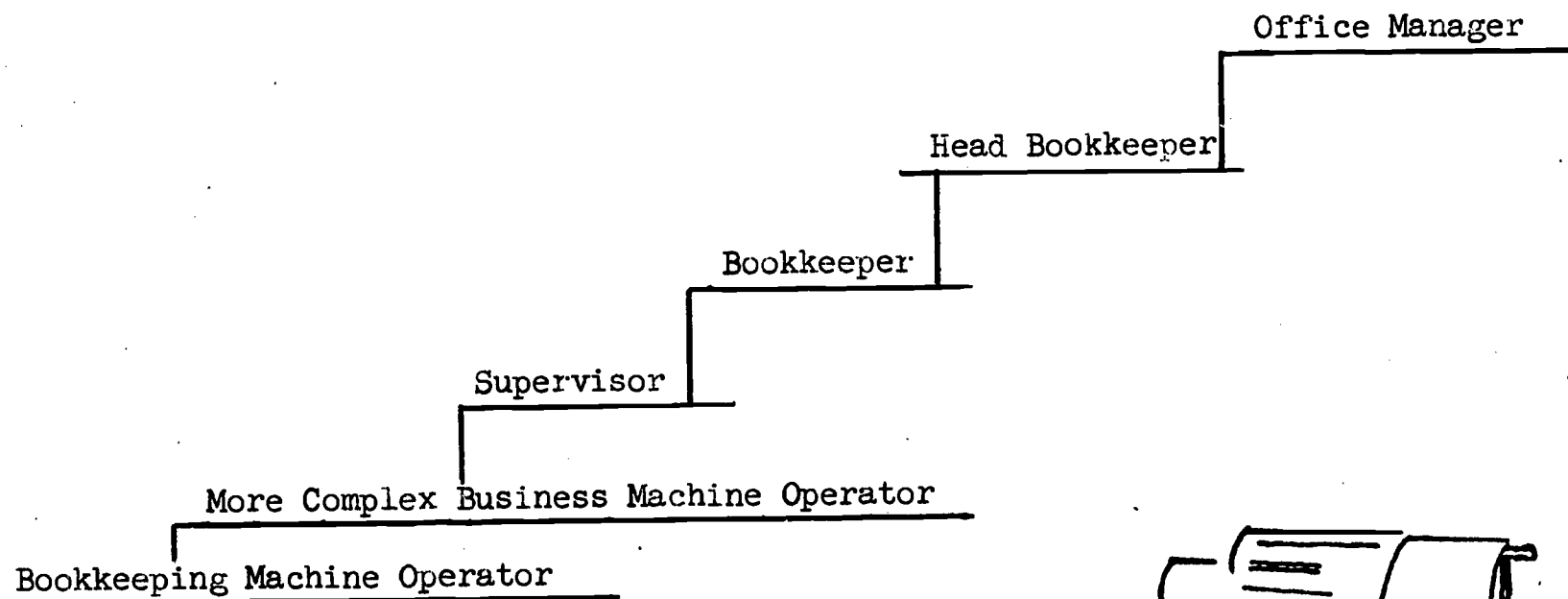
Bookkeeping Machine Operator - DOT Code 215.388  
(July 67)

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IS THERE A NEED FOR BOOKKEEPING MACHINE OPERATORS IN UTAH?

1. In 1965, there were 760 bookkeeping machine operators in Utah. It is predicted that by 1970 this number will increase to 959.
2. Electronic computers are replacing some bookkeeping machine operators, but because of general business growth the need will continue to rise.
3. There is a high turnover in this field due to many who leave to marry or raise families.
4. Five out of six bookkeeping machine operators are women.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



## Y O U A R E A R A I L R O A D B R A K E M A N

WHAT DO RAILROAD BRAKEMEN DO?

THEY WORK WITH CONDUCTORS AS MEMBERS OF A TRAIN CREW ON FREIGHT AND PASSENGER TRAINS.

THEY:

1. See that the correct flags and warning lights are displayed at the front and rear of the train to protect it while it is in motion and at stops
2. Check the air brake equipment on the cars and made sure that tools and other equipment are in their proper place
3. Make visual checks while the train is in motion to look for smoke, sparks, indications of sticking brakes, overheated car bearings and other irregularities
4. Make a walking inspection of the train at different stops along the way
5. Regulate air-conditioning, lighting, and heating equipment in passenger cars
6. Assist the conductor by collecting tickets and generally looking after the needs of the passengers

YARD BRAKEMEN HELP MOVE CARS AROUND IN THE RAILROAD YARD TO MAKE UP TRAINS OR BREAK THEM UP.

THEY:

1. Release handbrakes on cars to control their movement
2. Switch tracks to guide the cars to different locations
3. Hook and unhook freight and passenger cars

WHAT SHOULD RAILROAD BRAKEMEN BE LIKE?

## THEY SHOULD BE:

1. Healthy
2. In good physical condition
3. Dependable
4. Alert

## THEY SHOULD HAVE:

1. Excellent hearing
2. Excellent eyesight
3. Full use of hands and legs
4. Good color vision

## THEY SHOULD BE ABLE TO:

1. Do some strenuous work (Yard Brakemen)
2. Work well with others
3. Serve the public, while helping the conductor, in a friendly, polite, and pleasing manner.

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are shop classes and industrial arts.

## AFTER HIGH SCHOOL:

Most employers require a high school diploma but no additional schooling. You will receive your training on the job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for yard brakemen was \$600 a month.
2. The average pay for brakemen on freight trains was \$740 a month.
3. The average pay for brakemen on passenger trains was \$760 a month.

WHAT ARE WORKING CONDITIONS LIKE?

1. Yard brakemen work outdoors in all kinds of weather. Train brakemen spend part of their time outdoors checking the train along the track, wherever it may be.
2. Train brakemen travel much of the time and frequently are gone from home overnight or from two to three days at a time.
3. Brakemen have to work different shifts including some weekends, holidays, and nights.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

According to a recent report, railroad employees work in the following areas:

- 35% - Salt Lake
- 31% - Ogden
- 10% - Provo
- 24% - scattered throughout the state

## TYPE OF INDUSTRY:

Railroad companies and some large industrial plants such as Kennecott Copper and Geneva Steel employ practically all of Utah's brakemen.

Vocational Information For Education and Work

Railroad Brakeman - DOT Code 910.884  
(July 67)

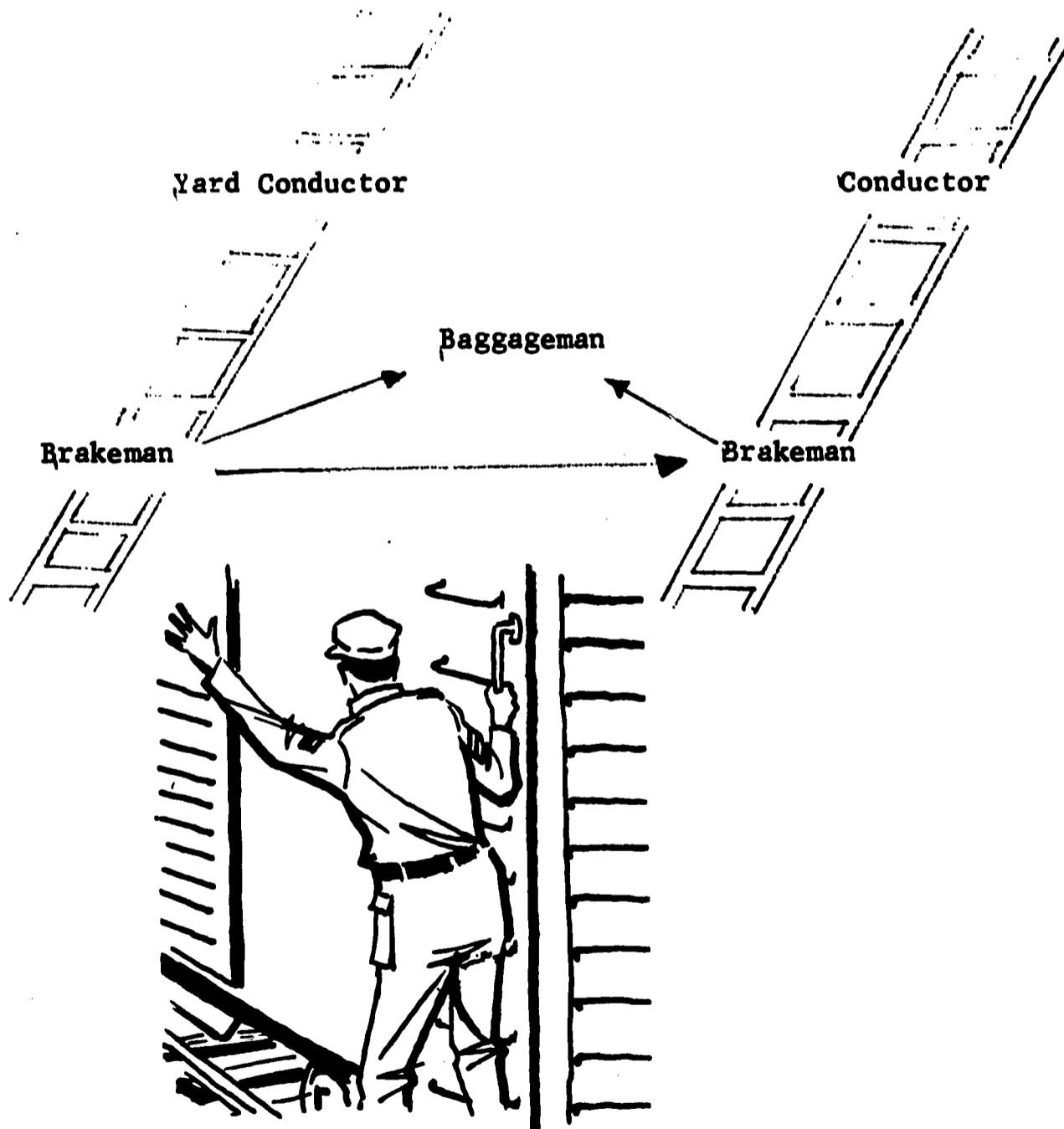
IS THERE A NEED FOR BRAKEMEN IN UTAH?

1. In 1965, there were 887 brakemen in Utah. It is predicted, that by 1970, this number will decrease to 803.
2. The need for brakemen will decrease because of a steady drop in railroad business and also because of new equipment that makes the brakeman's job easier.

CAN YOU ADVANCE?

IN A YARD

PASSENGER TRAINS



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## YOU ARE A BRICKLAYER

### WHAT DO BRICKLAYERS DO?

THEY USE MORTAR AND BRICK TO BUILD WALLS, PARTITIONS, FIREPLACES, CHIMNEYS, FURNACE LININGS AND OTHER STRUCTURES BY:

1. Spreading mortar with a trowel, placing a brick in it, and tapping the brick into place
2. Scraping away the excess mortar and trimming the mortar between the bricks with the point of a trowel or some other finishing tool to achieve the desired appearance
3. Breaking bricks with a hammer or sawing them to fit spaces too small for whole bricks
4. Keeping the row of bricks level by using a tightly stretched cord as a guide
5. Using leveling instruments to check the surface and corners of walls to make sure that the bricks have been lined up evenly

### THEY MAY ALSO:

1. Begin their project by studying blueprints of the job and planning it out
2. Specialize in a particular kind of brick work such as patio work or refractory brick work which involves the lining of industrial furnaces
3. Do advanced bricklaying such as making window openings, doorway arches, using bricks in decorative patterns, and working with natural stone
4. Use other building blocks in some of their work, such as terra cotta, hollow tile, cement and cinder block



WHAT SHOULD BRICKLAYERS BE LIKE?

## THEY SHOULD BE:

1. Willing to do hard work
2. In good physical condition
3. Energetic
4. Proud of their work

## THEY SHOULD HAVE:

1. Good eyesight
2. An eye for straight lines and proportion
3. Skillful hands
4. A sense of balance

## THEY SHOULD BE ABLE TO:

1. Tolerate heat and dust
2. Do neat and precise work
3. Stoop, bend, lift, and stand for long periods of time
4. Work on scaffolding

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, mechanical drawing, and shop.

## AFTER HIGH SCHOOL:

1. Most employers prefer to hire someone who has had experience in the construction trade, usually working as a hod carrier or as a helper to a bricklayer.
2. To become a fully qualified bricklayer you must train for three years as an apprentice. During this time you will receive supervised on-the-job training and related classroom instruction.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the union wage for bricklayers working in construction was \$4.39 an hour.
2. The bricklayer who is employed to repair brick furnaces or do other brick maintenance work earns less than the bricklayer in construction but works regularly and is not subject to winter layoffs.
3. The apprentice begins at about half the regular salary and receives a raise every six months. At the end of his four year apprenticeship he will be earning nearly the full wage.

WHAT ARE WORKING CONDITIONS LIKE?

1. Bricklaying is seasonal work with very little work during the bad winter months. At times, there are brief layoffs between jobs.
2. You must work outdoors in all kinds of weather.
3. Some of your work will be done in cramped quarters or up high on scaffolding.
4. You will have to tolerate dusty air
5. There is danger of falling from scaffolding, being struck by a falling object, skin burns from lime, and infected fingers from being cut by bricks. However, safety courses and protective clothing reduce much of the danger.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Jobs for bricklayers are found almost everywhere in the state. However, 75% of them are found in the area between Provo and Brigham City.

## TYPE OF INDUSTRY:

The majority of bricklayers work in the construction industry. Others work in smelters and large industrial plants repairing brick furnaces.

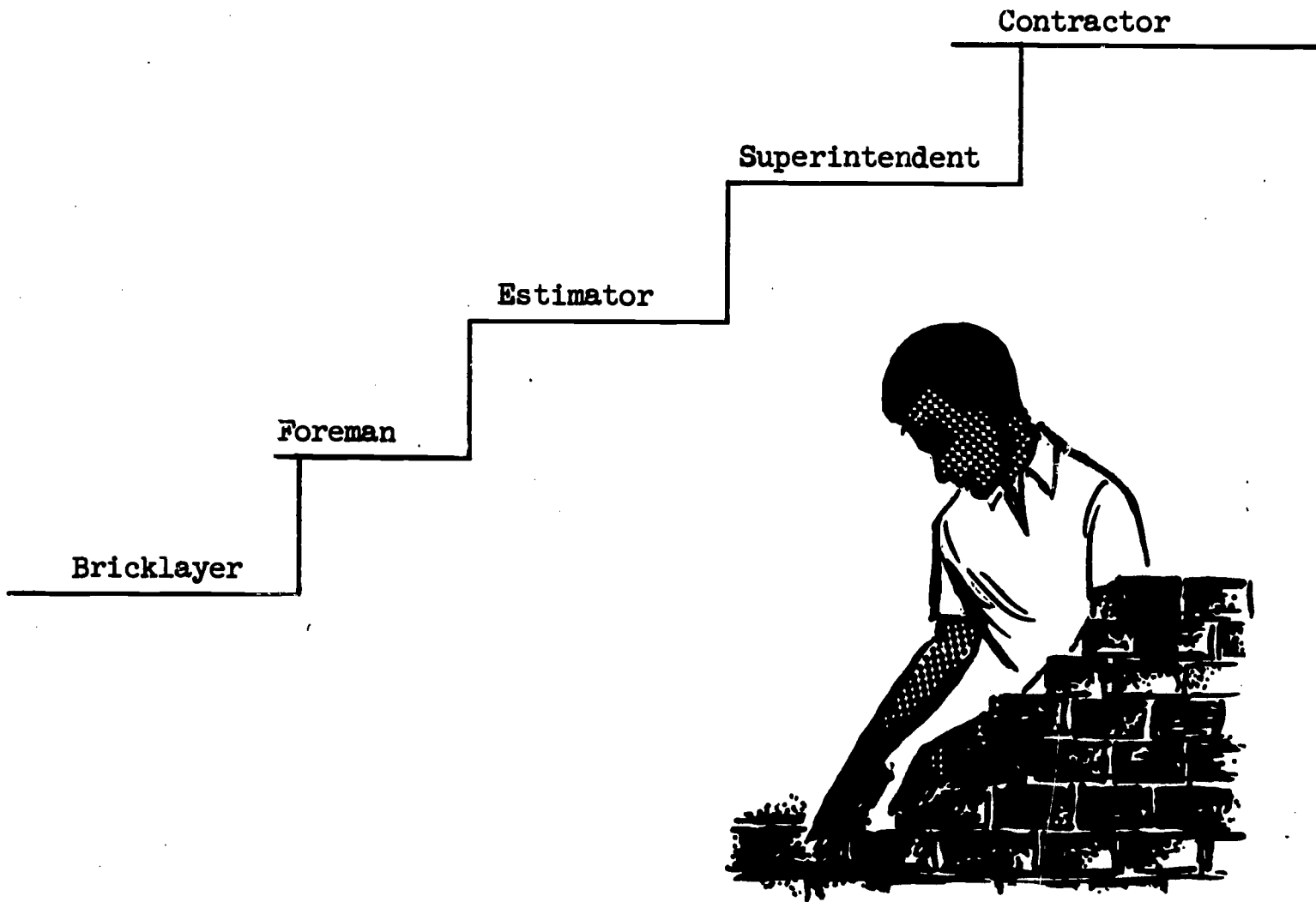
Vocational Information For Education and Work

Bricklayer - DOT Code 861.381  
(July 67)

IS THERE A NEED FOR BRICKLAYERS IN UTAH?

1. In 1965 there were 618 bricklayers in Utah. It is predicted that by 1970 this number will increase to 767.
2. The demand for bricklayers depends mostly upon the construction industry. It is generally predicted that the construction industry will continue to grow.
3. Stronger and less expensive materials are replacing brick in some buildings. The bricklayer must often learn to work with new materials.

CAN YOU ADVANCE?



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WHAT DO BUS DRIVERS DO?

THEY DRIVE BUSES OVER A SCHEDULED ROUTE TO TRANSPORT PASSENGERS TO AND FROM WORK, SCHOOLS, AND HOMES.

CITY BUS DRIVERS:

1. Make regular stops every few blocks
2. Operate the controls that open and close the doors to let people on and off
3. Collect cash fares, tokens, and transfers, make change, sell tokens, and issue transfers
4. Answer questions about time schedules, which buses go where, and where different addresses are located

LONG DISTANCE BUS DRIVERS:

1. Move their bus from the terminal to the loading platform
2. Greet passengers, collect tickets, and help load baggage into the baggage compartment
3. Announce destinations, times of arrival, lunch stops and other information
4. May make stops along the way to pick up extra passengers from whom they collect the fare, or to unload packages and freight

SCHOOL BUS DRIVERS PICK UP CHILDREN NEAR THEIR HOMES AND TRANSPORT THEM TO AND FROM SCHOOL WHILE KEEPING ORDER ON THE BUS.

SIGHT SEEING AND CHARTERED BUS DRIVERS MAY ANNOUNCE POINTS OF INTEREST OVER A PUBLIC ADDRESS SYSTEM.

ALL BUS DRIVERS:

1. Check tires, brakes, lights, and safety equipment before beginning their run
2. Regulate heating, lighting, and ventilation on their bus
3. Turn in cash, transfers, tickets, and a report of their run at the end of the day
4. Must know all traffic laws and regulations, be careful drivers and observe speed limits

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WHAT SHOULD BUS DRIVERS BE LIKE?

## THEY SHOULD BE:

1. Cautious
2. Courteous
3. Tactful
4. Even tempered
5. Calm
6. In good health

## THEY SHOULD HAVE:

1. A neat appearance
2. A pleasant personality
3. Stable emotions
4. Good eye-hand-foot coordination
5. Good eyesight and color vision
6. Quick reflexes

## THEY SHOULD BE ABLE TO:

1. Keep calm under pressure
2. Get along well with people
3. Judge distances accurately
4. Drive skillfully

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are driver training, arithmetic, and English.

## AFTER HIGH SCHOOL:

1. Most employers prefer to hire high school graduates.
2. You will receive your training on the job.
3. You must have a regular driver's license plus a chauffeur's license. To obtain a chauffeur's license, you must be 21 years old.
4. Utah Technical College, Provo offers a course in school bus driver education.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for city bus drivers in Utah was from \$2.75 - \$3.05 an hour.
2. The union wage for long distance bus drivers was \$3.23 an hour. They may make as much as \$3.50 - \$4.00 an hour depending upon the type of bus they drive and the length of their run.
3. School bus drivers generally work on a part-time basis and average about \$2.50 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Bus drivers generally have to work irregular hours and "swing shifts" which includes evenings, nights, weekends, and holidays.
2. Although driving a bus is not hard physically it can be very tiring and nerve wracking.
3. Many bus drivers enjoy the freedom they have from supervision.
4. At times, you have to deal with rude customers, but must remember to be polite at all times.
5. Long distance bus drivers may drive for as long as 10 hours at a time and may have to spend some evenings away from home.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The majority of Utah's bus drivers live in the Salt Lake-Ogden-Provo area. Salt Lake and Ogden have the only major city bus systems. School bus drivers can be found throughout the state.

## TYPE OF INDUSTRY:

School districts, local transit bus companies, charter and sightseeing lines and interstate bus companies employ the majority of bus drivers.

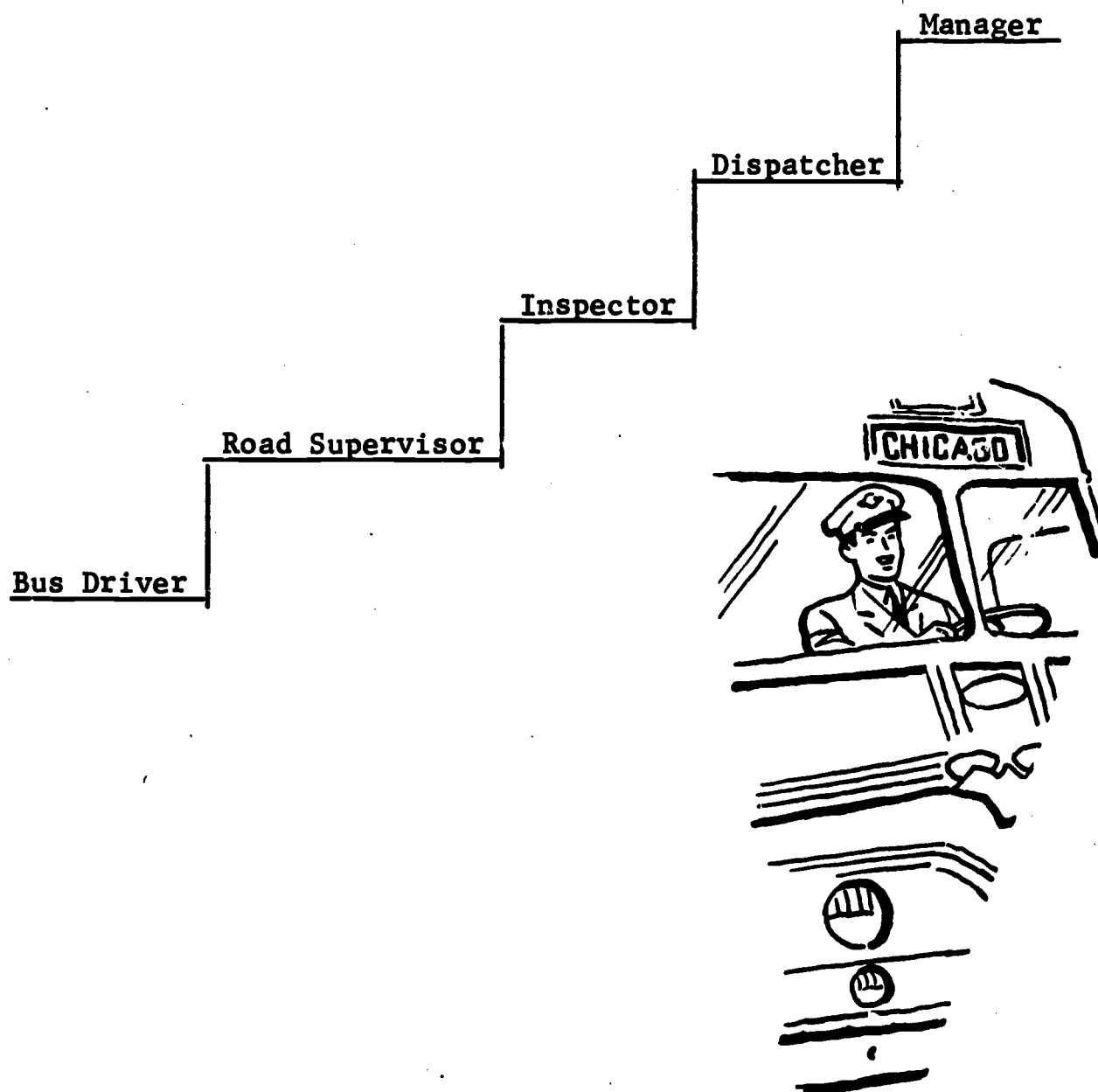
**Vocational Information For Education and Work**

Bus Driver - DOT Code 913.363  
(July 67)

IS THERE A NEED FOR BUS DRIVERS IN UTAH?

1. In 1965, there were 1,219 bus drivers in Utah. It is predicted, that by 1970, this number will increase to 1,477.
2. The need for school bus drivers will continue to increase as the population grows. The need for city and long distance bus drivers will stay about the same.
3. There are a few women in this field.

CAN YOU ADVANCE?



Prepared Cooperatively By:  
 Utah State Board of Education  
 Utah State Department of Employment Security



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**YOU ARE A BUYER****WHAT DO BUYERS DO?****THEY SELECT THE MERCHANDISE THEIR STORE WILL SELL BY:**

1. Keeping informed of current styles and trends, maintaining close contact with customers and sales people, and keeping sales records for each item in order to know which merchandise will sell the best
2. Helping prepare a budget which tells how much money they have to spend
3. Deciding where the "best buys" can be made for different types of merchandise
4. Ordering the quantity and type of merchandise they want from salesmen who come to them, at fashion shows for buyers, and from wholesale houses and manufacturers in big centers such as New York or Chicago where they may make several trips a year
5. Checking incoming merchandise to see that orders have been correctly filled

**THEY PLAN THE SELLING PROGRAM FOR THE MERCHANDISE THEY HAVE PURCHASED BY:**

1. Determining the selling price of each item and marking down prices to clear the shelves of items that don't sell
2. Arranging for advertising, displays, special sales, and promotionals
3. Informing salespersons about the merchandise and its selling points



WHAT SHOULD BUYERS BE LIKE?

## THEY SHOULD BE:

1. Persuasive
2. Outgoing
3. Enthusiastic
4. Energetic
5. Ambitious
6. Friendly
7. Personable

## THEY SHOULD HAVE:

1. Initiative
2. A liking for people
3. A neat and pleasing appearance
4. Good mental and physical health
5. Endurance
6. Good taste

## THEY SHOULD BE ABLE TO:

1. Work under great pressure.
2. Accept failures without giving up.
3. Take care of many details.
4. Associate with all kinds of people.
5. Express themselves clearly.
6. Judge the quality of merchandise.

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are English, speech, mathematics, business, economics, salesmanship and art.

## AFTER HIGH SCHOOL:

1. Experience in retail selling is essential. Even part-time work at Christmas or on weekends will be helpful. Most buyers work their way up from stock boys, sales clerks and assistant buyers.
2. The most important consideration for advancement is a "sales personality." However, more and more employers are looking for people with college training to fill buyers' positions.

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### HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for buyers in Utah was \$600 a month with some making as much as \$1,000 a month. In larger cities buyers who buy for a chain of stores may make as much as \$25,000 a year.
2. Their starting salary was from \$350 to \$500 a month.
3. The salary and total earnings vary with the size and type of store and the department to which assigned.
4. Buyers generally receive some percentage of the total increase in sales, therefore total earnings will vary with the amount of success of the various sales promotions.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Buying is a highly competitive business. There is a lot of pressure to do well. Too many failures and the buyer may be replaced.
2. Frequent buying trips to distant centers is common. Although this may sound fun and exciting, it involves a lot of hectic work and little free time.
3. A 48-hour week is not uncommon, nor is overtime during the busy seasons. The buyer generally has to work Saturdays, taking some other day of the week off.

### WHERE IN UTAH WILL YOU WORK?

1. Buyers work in retail stores generally located in large cities, either in the downtown area or in suburban shopping centers.
2. Retail stores in smaller cities usually employ a store manager who does everything concerned with running the store, including the buying.

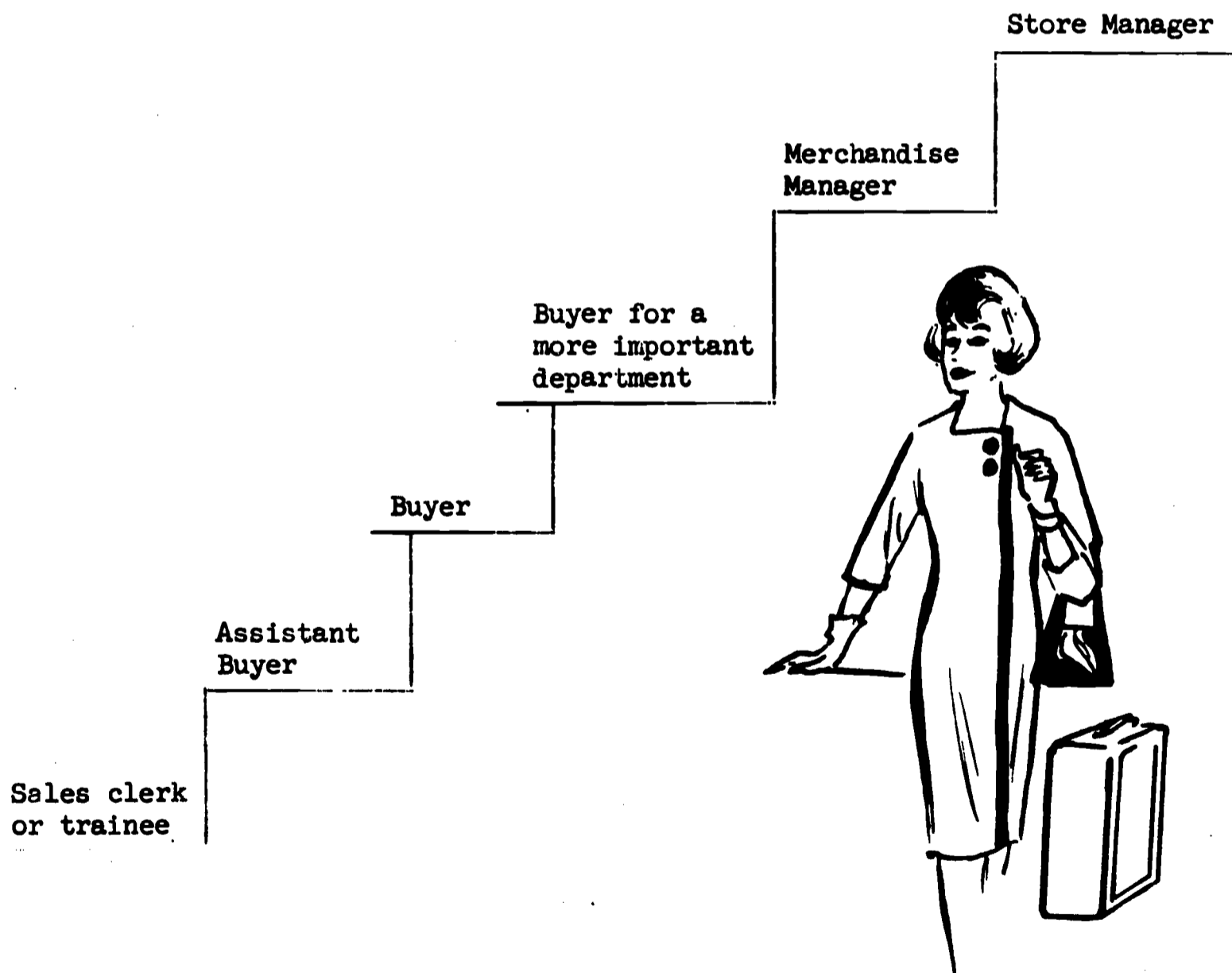
## Vocational Information For Education and Work

Buyer - DOT Code 162.158  
(July 67)

IS THERE A NEED FOR BUYERS IN UTAH?

1. In 1965 there were 620 buyers in Utah. It is predicted that by 1970, this number will increase to 700.
2. The need for buyers will increase as the population increases. In cities where the population tends to remain the same, the only need will be to replace those who quit or retire.
3. There is as much demand for women in this field as men.

CAN YOU ADVANCE?



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**YOU ARE A CABINETMAKER****WHAT DO CABINETMAKERS DO?**

**THEY MAKE, REPAIR AND INSTALL WOODEN CABINETS, FURNITURE, SHELVES, PANELING AND PARTITIONS.**

**THEY:**

1. Make detailed drawings of the object, indicating materials to be used and methods of construction.
2. Select the wood and other materials to be cut and shaped.
3. Set up and operate woodworking machines such as power saws, jointers, planers, and sanders.
4. Glue, fit, and clamp parts together to form the complete unit.
5. Finish wood work by scraping, sanding, and polishing.

**THEY MAY ALSO:**

1. Use precut parts to make cabinets and other objects.
2. Paint, varnish, or stain articles.
3. Install the completed work in the customer's home.
4. Repair and refashion articles of furniture.
5. Work in custom furniture shops and do carving and decorative work.

**WHAT SHOULD CABINET MAKERS BE LIKE?**

**THEY SHOULD BE:**

1. Skillful in the use of their hands
2. Proud of their work
3. Accurate
4. Dependable

**THEY SHOULD HAVE:**

1. Good vision
2. Good eye-hand coordination
3. An eye for judging size and distance
4. Strong hands
5. An ability to use tools

**THEY SHOULD BE ABLE TO:**

1. Stand for a long period of time
2. Tolerate wood dust
4. Work rapidly and accurately

(For a detailed description of your capabilities, see your counselor)

**WHAT TRAINING WILL PREPARE YOU?**

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are wood and metal shop, mechanical drawing, mathematics, and English.

**AFTER HIGH SCHOOL:**

1. A high school diploma is usually required.
2. The best way to train for this job is as an apprentice. As an apprentice you will receive on-the-job training and related classroom instruction. After four years as an apprentice you may become a fully qualified worker called a journeyman.
3. A few workers have become cabinet makers by working as helpers. Opportunities for helpers are not nearly as good as for journeymen.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 cabinetmakers in Utah earned from \$2.80 to \$3.20 per hour.
2. Their starting salary was from \$1.50 to \$2.00 per hour.
3. Some cabinetmakers earned as much as \$4.25 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Lighting and ventilation are usually adequate.
2. Wood dust, noise, and vibration of machinery are part of the work surroundings.
3. The most frequent hazards are minor cuts and bruises to the hands.

WHERE IN UTAH WILL YOU WORK?

GEOGRAPHICAL LOCATION:

Approximately 75% of Utah's cabinetmakers are employed in the Salt Lake-Ogden-Provo area.

TYPE OF INDUSTRY:

Cabinetmakers are employed by lumber companies, furniture manufacturing companies, custom cabinet shops, wholesale cabinet shops, and the construction industry.

Vocational Information For Education and Work

Cabinetmaker - DOT Code 669.380  
(July 1967)

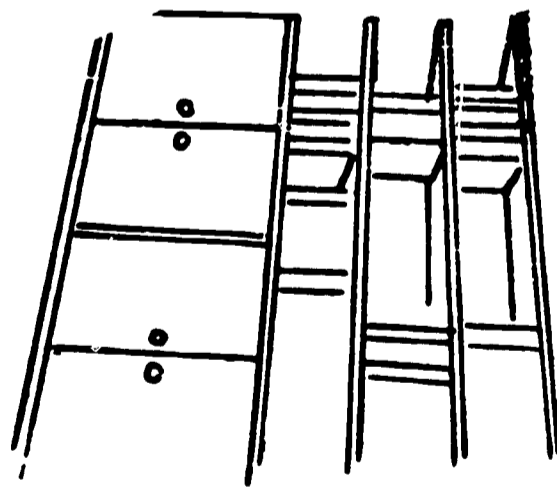
IS THERE A NEED FOR CABINET MAKERS?

1. In 1965 there were 300 cabinetmakers in Utah. It is predicted that by 1970 this number will increase to 350.
2. Normal turnover, retirements and deaths will provide job opportunities, but the need for additional cabinetmakers is not expected to increase rapidly.

CAN YOU ADVANCE?

Estimator

Foreman

Cabinetmaker

Prepared Cooperatively By:  
 Utah State Board of Education  
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**Y O U   A R E   A   C A R P E N T E R****WHAT DO CARPENTERS DO?**

**THEY BUILD AND REPAIR STRUCTURES AND FIXTURES OF WOOD, PLYWOOD, AND OTHER WOOD MATERIALS.**

**THEY:**

1. Construct the wood framework for houses and buildings, including forms for floors, walls, and roofs
2. Build stairs and lay floors
3. Install wood paneling and wallboard
4. Build and install cabinets, windowframes, doorframes, and doors
5. Put up scaffolding and temporary buildings on construction sites
6. Build forms in which concrete is poured for the foundations of buildings, bridges, and other structures
7. Repair structures and fixtures of wood and plywood
8. May specialize in one of the above areas such as cabinet-making or in specialty work such as decorative wood finishing.

**FOR EACH JOB, CARPENTERS MUST:**

1. Choose the right kind of wood material
2. Measure and saw the wood accurately
3. Fit the wood in place and fasten it with nails, bolts, wood screws or glue.



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WHAT SHOULD CARPENTERS BE LIKE?

## THEY SHOULD BE

1. Accurate and precise
2. Patient
3. In good physical condition
4. Proud of their work
5. Agile

## THEY SHOULD HAVE:

1. Normal hearing and vision
2. Average strength
3. Good finger coordination
4. Full use of legs and arms
5. Good perception of form and size

## THEY SHOULD BE ABLE TO:

1. Climb, balance, stoop, kneel, crouch, and crawl
2. Reach, grasp, and hold
3. Work at heights
4. Use basic arithmetic
5. Work well alone or with others

(for detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are drafting, mechanical drawing, mathematics, shop, and woodwork.

## AFTER HIGH SCHOOL:

1. The best way to become a fully qualified carpenter is to train for four years as an apprentice. During this time you will receive supervised on-the-job training and classroom instruction.
2. Utah Technical College, Salt Lake and Provo, offer two-year courses in carpentry. Graduates of these courses will have an easier time finding a job.
3. Some workers learn the trade as helpers.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the basic wage for carpenters in Utah was \$4.10 an hour.
2. The starting pay for apprentices was approximately \$2.60 an hour.
3. Carpenters doing repair work for large companies make about \$3.26 an hour. This is steady year-round work.
4. Carpenters in construction are often laid off during winter months and other periods of bad weather.

WHAT ARE WORKING CONDITIONS LIKE?

1. Some of your work is done indoors, some outdoors.
2. The surroundings are generally quite rough.
3. There is danger of cuts and other injuries from sharp tools, and falls from scaffolding.
4. Your work area will generally be noisy and dusty.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Carpenters can find work in almost any city. However, approximately 80% of Utah's carpenters work in the highly populated Wasatch Front area of Box Elder, Davis, Salt Lake, and Weber counties.

## TYPE OF INDUSTRY

The majority of carpenters work for contractors and homebuilders in the construction industry. Others do remodeling work or work for themselves doing small jobs. A fairly large number work for factories doing repair work.

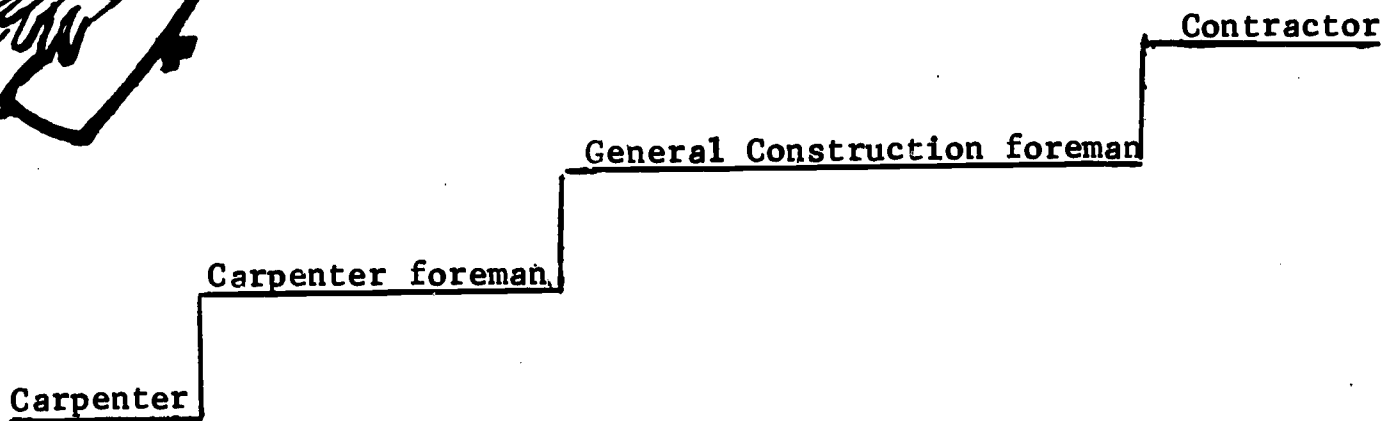
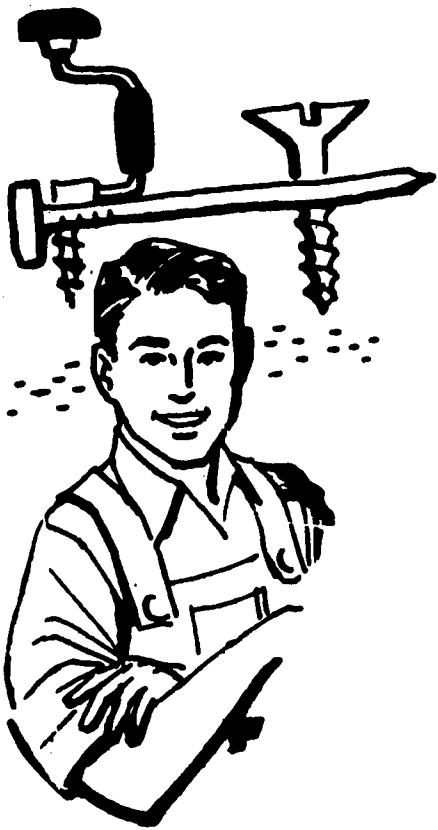
**Vocational Information For Education and Work**

Carpenter - DOT Code 860.381  
(July 67)

IS THERE A NEED FOR CARPENTERS IN UTAH?

- 1. In 1965 there were 4,700 carpenters in Utah. It is predicted, that by 1970, this number will increase to 5,000.
- 2. The need for carpenters varies with the amount of construction activity for any period. It has been predicted that Utah's construction industry will continue to grow.

CAN YOU ADVANCE?



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**Prepared Cooperatively By:**  
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## YOU ARE A CASHIER

### WHAT DO CASHIERS DO?

THEY RECEIVE PAYMENTS MADE BY CUSTOMERS FOR GOODS AND SERVICES BY:

1. Receiving money paid by customers, making change when necessary, and giving the customer a receipt
2. Listing and totaling individual items, usually on an adding machine or cash register, and recording other information about the merchandise
3. Figuring sales tax and adding it to the total of the sale
4. Okaying checks or calling for a supervisor to do so
5. Counting the cash at the end of the day and balancing it with the register tapes
6. Preparing a daily report of sales or receipts

CASHIERS MAY HAVE OTHER DUTIES DEPENDING ON WHERE THEY WORK.

1. A theater cashier and amusement park cashier may operate a ticket-dispensing machine and answer the telephone when information is desired.
2. A restaurant cashier may be a hostess, handle reservations for meals, type menus, and take care of a candy and cigarette counter.
3. A drugstore, department store, or supermarket cashier may sack the customers' purchases and restock shelves.
4. A hotel or motel cashier may operate a check room and keep records of telephone calls and room service calls.

WHAT SHOULD CASHIERS BE LIKE?

THEY SHOULD BE:	THEY SHOULD HAVE:	THEY SHOULD BE ABLE TO:
1. Accurate	1. Good finger coordination	1. Handle money carefully and accurately
2. Tactful	2. Good eye-hand coordination	2. Stand for long periods of time
3. Dependable	3. Good vision and hearing	3. Work alone without constant supervision
4. Friendly	4. A pleasant personality	4. Work accurately under pressure
5. Honest	5. A well-groomed appearance	5. Make change correctly and use basic arithmetic

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are business arithmetic, bookkeeping, typing, business law, office machine practice, and other business classes.

**AFTER HIGH SCHOOL:**

1. Most establishments train their cashiers on the job and may also give them some related classroom instruction.
2. Utah Technical College, Salt Lake, offers a course in checkstand training for future cashiers.
3. If the cashier position is one requiring bookkeeping or accounting knowledge, then training in these areas will be required.

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### HOW MUCH MONEY WILL YOU MAKE?

1. In 1967 the average pay for cashiers in Utah was \$1.40 to \$1.75 an hour, depending upon the length of time of employment.
2. Beginning pay was \$1.25 to \$1.40 an hour.
3. Some cashiers, with extra responsibilities, made as much as \$2.00 or more an hour.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Most of the establishments that hire cashiers are open late in the evenings, weekends (including Sundays) and often on holidays.
2. The work area is often small and confined but well arranged. It may be in a small booth or cage or behind a counter.
3. During busy periods there is pressure to hurry plus a lot of noise.
4. You must be pleasant even when customers are rude and irritable.
5. Some of the work is routine and may become dull.

### WHERE IN UTAH WILL YOU WORK?

1. Theaters, retail stores, hotels, restaurants, drugstores, grocery stores and amusement parks employ the majority of cashiers.
2. Cashiers are found everywhere in Utah that the above mentioned establishments are found. In smaller establishments, the manager, assistant manager, or a salesperson generally handles the money.

## Vocational Information For Education and Work

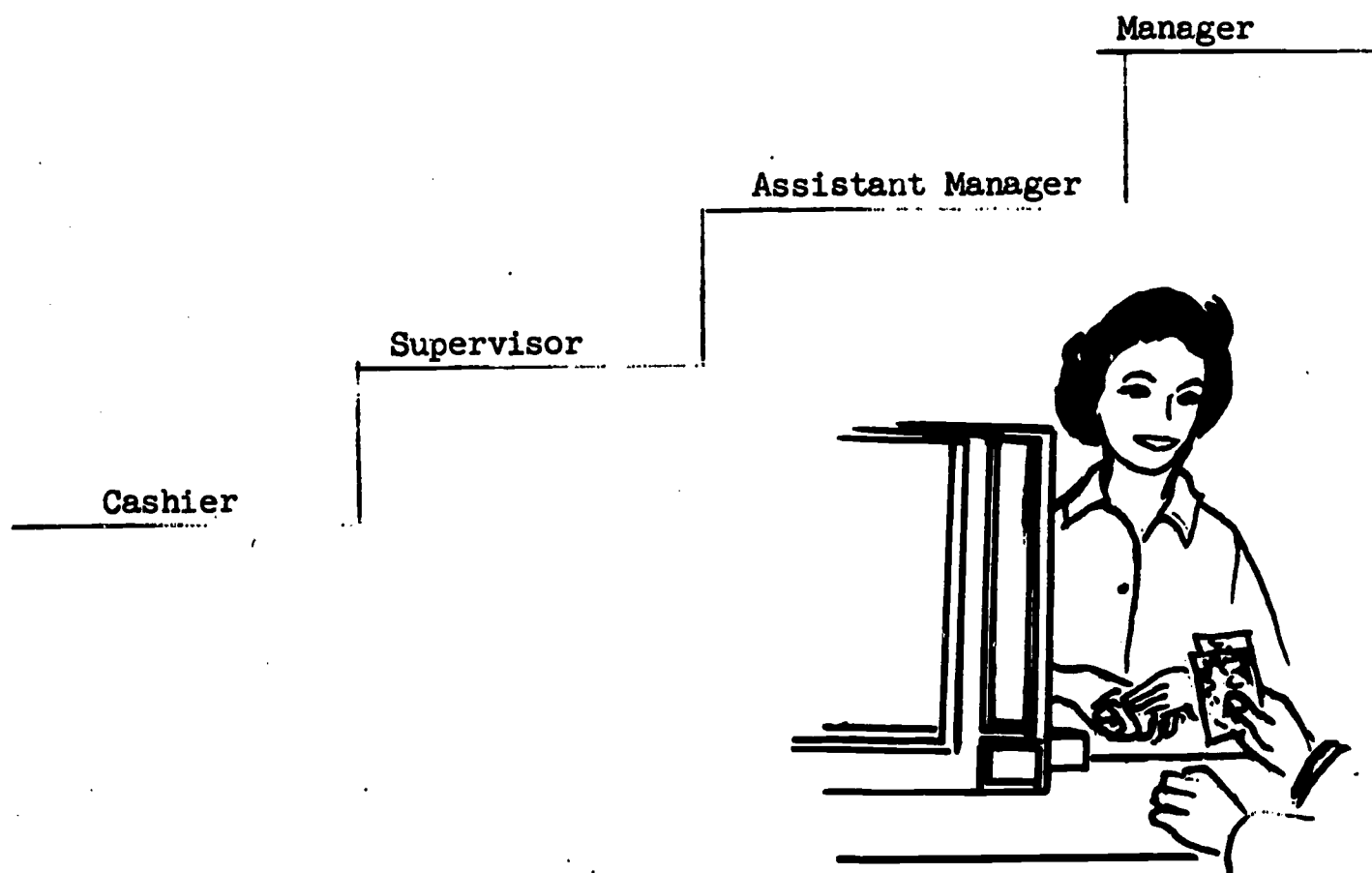
Cashier - Dot Code 211.468  
(July 67)

IS THERE A NEED FOR CASHIERS IN UTAH?

1. In 1965 there were 1,762 cashiers in Utah. It is predicted that by 1970 this number will increase to 1,929.
2. This is a good field for women but is limited for men. However, it is a good way to learn about a business for a man who plans to become a store manager.
3. The need for cashiers is generally large because of a frequent turnover of workers who get married, advance, or leave for other reasons.

CAN YOU ADVANCE?

There is little opportunity for advancement, especially for women.



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



**YOU ARE A CEMENT MASON****WHAT DO CEMENT MASONS DO?**

THEY DO THE CEMENT WORK ON MANY TYPES OF CONSTRUCTION JOBS SUCH AS THE FOUNDATIONS, FLOORS, AND WALLS OF BUILDINGS, SIDEWALKS, DRIVEWAYS, TENNIS COURTS, SWIMMING POOLS, AND HIGHWAYS.

**THEY:**

1. make sure that forms which hold the concrete are properly set and correctly lined up
2. Mix or supervise the mixing of the cement
3. Pour, or if the concrete has been premixed in a special mixer truck, direct the pouring of the concrete mixture into the forms.
4. Settle the concrete by vibrating it with a special machine, then leveling the surface with a long straight board
5. Force large lumps down and the smooth cement to the top by using a tamp
6. Fill depressions and remove high spots, using a "float" and other handtools
7. Produce a final finished appearance in the concrete by smoothing it with a trowel.

**THEY MAY ALSO:**

1. Do repair work on old concrete by chipping out the concrete in the area to be patched, filling it with new concrete, then leveling it smooth with the older surface
2. Do specialized work such as laying a mastic coating over concrete to make it soundproof
3. Operate large finishing machines on bigger concrete projects such as highways, dams, or airfields.



WHAT SHOULD CEMENT MASONS BE LIKE?

## THEY SHOULD BE:

1. In good physical condition
2. Neat
3. Precise
4. Mechanically inclined

## THEY SHOULD HAVE:

1. Full use of hands, arms and legs
2. Good eye-hand coordination
3. Good finger coordination
4. Good judgment of form and distance

## THEY SHOULD BE ABLE TO:

1. Do hard physical work
2. Stoop, bend, lift, kneel and stand for long periods of time
3. Use basic arithmetic
4. Work fast and accurately
5. Recognize when cement is not settling properly

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, mechanical drawing, drafting, and shop.

## AFTER HIGH SCHOOL:

1. The best way to become a fully qualified cement mason is to train for three years as an apprentice. During this time you will receive supervised on-the-job training and related classroom instruction.

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**HOW MUCH MONEY WILL YOU MAKE?**

1. In 1966, the union wage for cement masons, in Utah, was \$4.40 an hour.
2. It is common for cement masons to work overtime since it is necessary to finish a project very soon after it is begun. They receive extra pay for overtime hours.
3. Cement masons are often laid off during winter months and periods of bad weather.
4. The starting salary for apprentices was approximately \$2.86 an hour.

**WHAT ARE WORKING CONDITIONS LIKE?**

1. The work is generally active and strenuous. On large projects much of the heavy work is done by laborers.
2. Your work is done outdoors and once started must be finished even in bad weather.
3. At times you will have to travel to construction sites in different parts of the state.

**WHERE IN UTAH WILL YOU WORK?****GEOGRAPHICAL LOCATION:**

75% of Utah's cement masons are employed in the Ogden-Salt Lake-Provo area. However, there are cement masons in practically every county and community in the state.

**TYPE OF INDUSTRY:**

Practically all cement masons are employed in the construction industry building the foundations floors and walls of buildings, highways, dams, airfields, tunnels, bridges, sidewalks, curbs and gutters, driveways, etc.

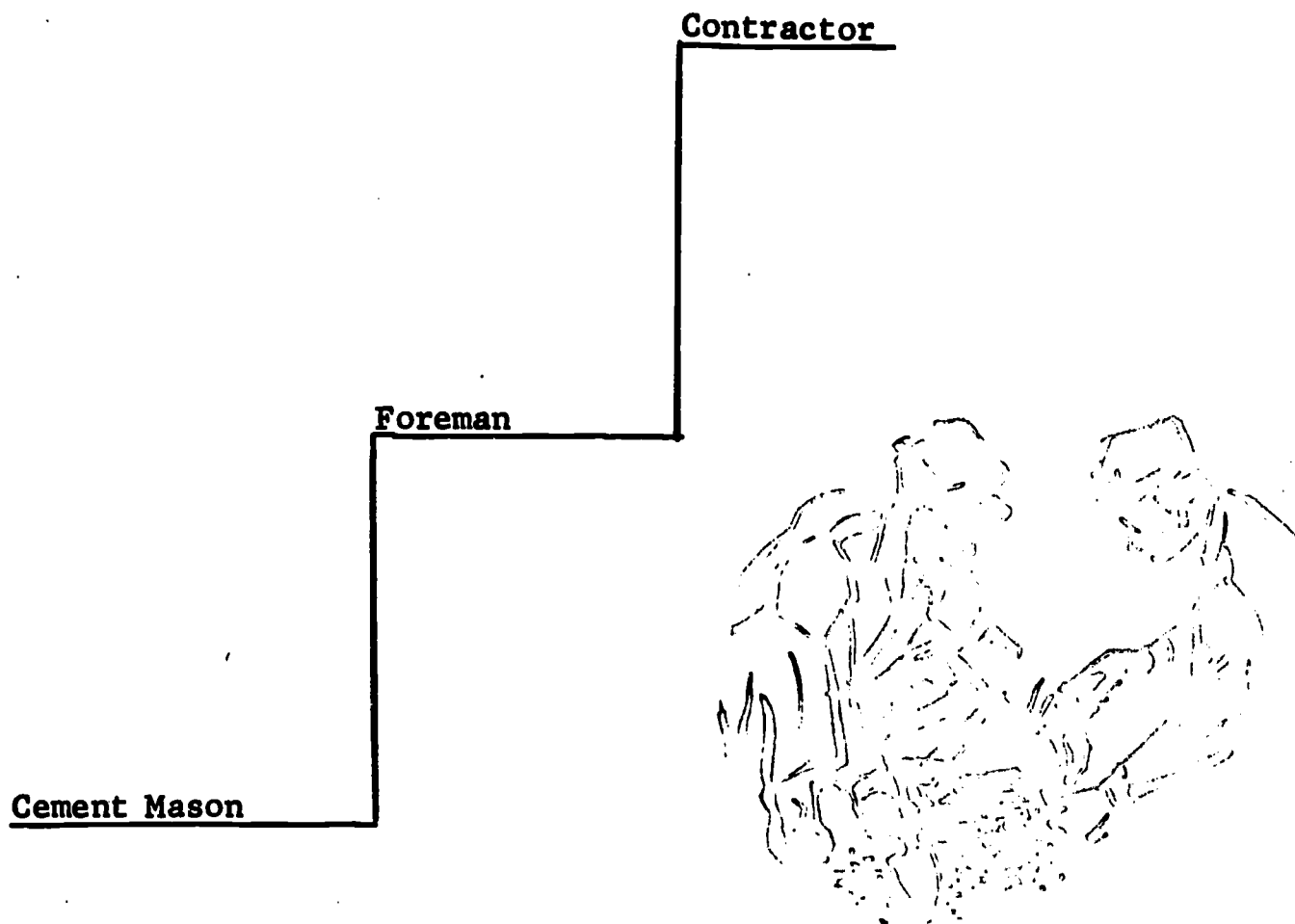
**Vocational Information For Education and Work**

Cement Mason -- DOT Code 844.884 (July 1967)

IS THERE A NEED FOR CEMENT MASONS IN UTAH?

1. In 1965, there were 476 cement masons in Utah. It is predicted that by 1970 this number will increase to 606.
2. The need for cement masons will increase as the construction industry grows. It is predicted that Utah's construction industry will continue to expand.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



YOU ARE A  
CENTRAL OFFICE TELEPHONE INSTALLER

WHAT DO CENTRAL TELEPHONE INSTALLERS DO?

THEY INSTALL THE SWITCHING AND DIALING EQUIPMENT USED IN THE CENTRAL OFFICES OF TELEPHONE COMPANIES.

THEY:

1. Set up the equipment in its proper place, wire it, and make any necessary adjustments
2. Connect incoming and outgoing telephone lines to the central office equipment
3. Test the equipment to see that it operates correctly

THEY MAY ALSO:

1. Install all the equipment for a new office, add equipment to an expanding office, or replace old-fashioned equipment
2. Work at special switchboards to test the telephone lines and connections to make sure they are all working correctly
3. See that motors, storage batteries, and other electric equipment are in working order
4. Locate and repair trouble in outside telephone lines in an emergency
5. Train inexperienced installers

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for installers in Utah was from \$3.15 - \$3.50 an hour.
2. Some earned as much as \$3.80 an hour depending upon their experience.
3. Their starting pay was from \$1.90 - \$2.25 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Although work is often done near live 110 volt circuits and on high ladders, it is not considered dangerous.
2. Installers must sometimes be on night call to provide 24 hour service to telephone users.
3. Your work area may be the rough surroundings of a new office still in construction or the pleasant surroundings of an office already established.
4. You may have to do some traveling to offices located throughout the state.
5. You will have to do a lot of climbing, kneeling, bending and stooping.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

90% of Utah's central office installers are employed in the Ogden-Salt Lake-Provo area. The rest are in small district offices throughout the state.

## TYPE OF INDUSTRY:

You would be employed in the telephone communications industry by Mountain States Telephone and Telegraph Company.

**Vocational Information For Education and Work**

Central Office Telephone Installer - DOT Code 822.281

(July 67)

WHAT SHOULD CENTRAL OFFICE TELEPHONE INSTALLERS BE LIKE?

## THEY SHOULD BE:

1. In good physical condition
2. Alert
3. Mechanically inclined

## THEY SHOULD HAVE:

1. Good finger coordination
2. Full use of hands, arms, & legs
3. Good eyesight and color vision

## THEY SHOULD BE ABLE TO:

1. Do detailed work that may become repetitious
2. Learn to read diagrams of electrical circuits
3. Work in awkward and small areas
4. Stand, climb, stoop, bend, reach, and lift

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are electrical shop classes, mathematics, science, and English.

## AFTER HIGH SCHOOL:

1. You must be a high school graduate.
2. You will receive your training on the job as well as some classroom instruction given by your company.
3. Basic engineering classes offered by colleges and vocational schools are helpful in finding a job and getting promotions.

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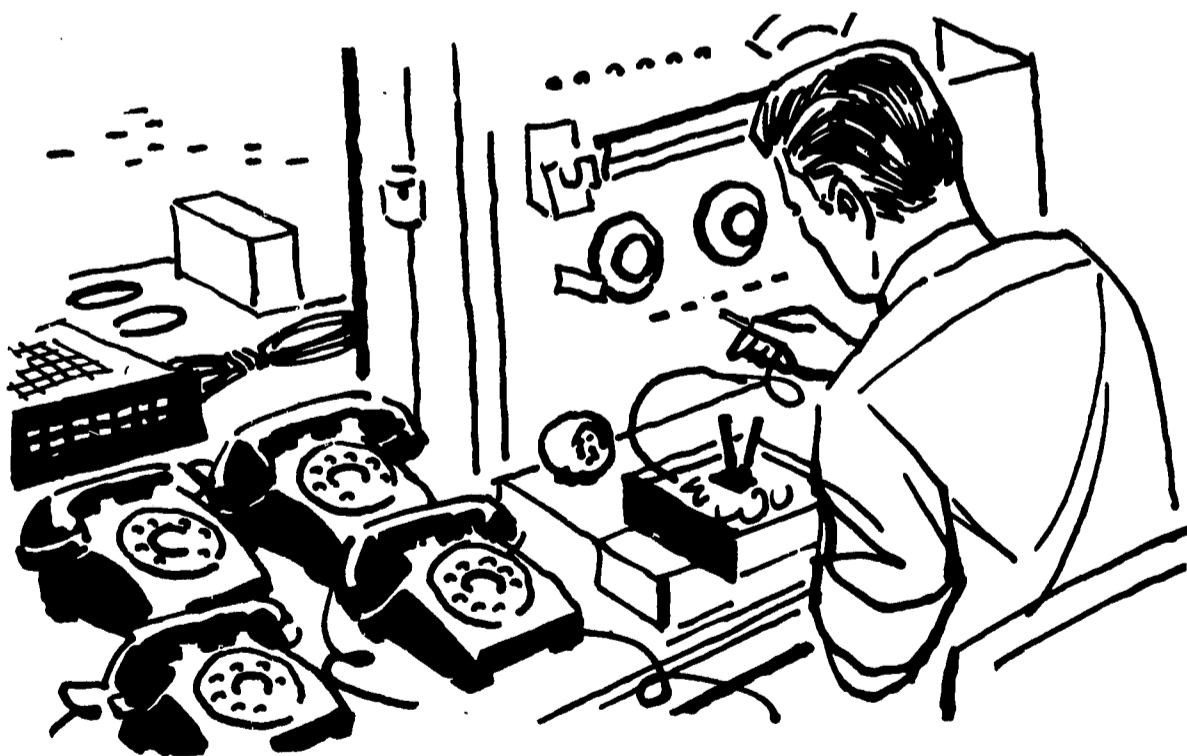
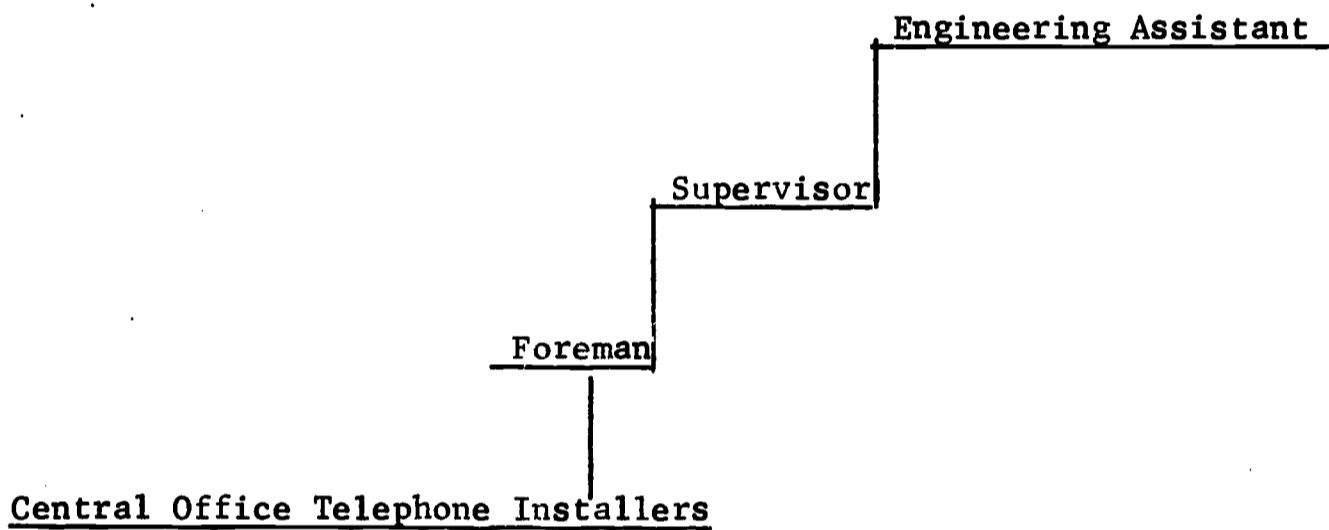
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IS THERE A NEED FOR CENTRAL OFFICE INSTALLERS IN UTAH?

- 1. In 1965, there were 134 central office telephone installers in Utah. It is predicted that by 1970 this number will increase to 167.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
 Utah State Board of Education  
 Utah State Department of Employment Security**



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**YOU ARE A CLERK - TYPIST****WHAT DO CLERK-TYPISTS DO?**

**THEY PERFORM GENERAL TYPING DUTIES WHICH INCLUDE:**

1. Typing letters
2. Typing information for various office records, reports, invoices, and forms
3. Construct on typewriters statistical tables and other tabulations and graphs
4. Typing from dictation or transcribing machines such as Dictaphones, Ediphones, etc.
5. Editing their work to be sure that it is free from error

**THEY MAY ALSO:**

1. Type from rough drafts or corrected copy
2. Do filing, elementary bookkeeping, operate other office machines, or act as a receptionist.
3. Make appointments, issue receipts, etc.
4. Classify, sort, index, insert, and remove materials from files
5. Answer the telephone

**IN SOME OFFICES THEY DO ONLY TYPING, WHILE IN OTHER OFFICES THEY MAY PERFORM THE DUTIES OF A SECRETARY.**

**EQUIPMENT THEY USE INCLUDES:**

1. Electric or manual typewriters
2. In some cases office machines such as Dictaphones, duplicating machines, calculating machines, photo copying machines, or other office machines.



WHAT SHOULD CLERK-TYPISTS BE LIKE?**THEY SHOULD BE:**

1. Precise in their work
2. Accurate
3. Neat
4. Fast
5. Dependable

**THEY SHOULD HAVE:**

1. A concern for detail
2. Good hand and finger coordination
3. Good eyesight
4. Clerical aptitude

**THEY SHOULD BE ABLE TO:**

1. Type at least 40 words per minute
2. Work rapidly and accurately
3. Do neat and precise work
4. Use correct English and express themselves clearly
5. Do simple routine tasks for long periods of time
6. Work while being closely supervised

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are English, arithmetic, bookkeeping, typing, and other business courses.

**AFTER HIGH SCHOOL:**

Usually a high school diploma is required. Business schools and trade schools offer typing and other courses which are needed to secure a position as a clerk-typist. Further training helps advancement possibilities. There are a number of schools in Utah where this training can be obtained.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for clerk-typists in Utah was \$66 per week.
2. The beginning clerk-typist made from \$55 to \$65 per week.
3. Clerk-typists can make as much as \$100 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. The office itself is generally pleasant, well-lighted, and well-ventilated.
2. Noise and interruptions are common, and may make it difficult to concentrate on the work.
3. The clerk-typist must generally sit for a long period of time while doing monotonous work.
4. Clerk-typists usually work 40 hours a week, Monday through Friday.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Over 80% of Utah's clerk-typists are employed in the Ogden-Salt Lake-Provo area; the other 20% work throughout the state.

**TYPE OF INDUSTRY:**

Banks, insurance firms, real estate offices, federal, state, and local government offices, wholesale houses and department stores employ the majority of clerk-typists.

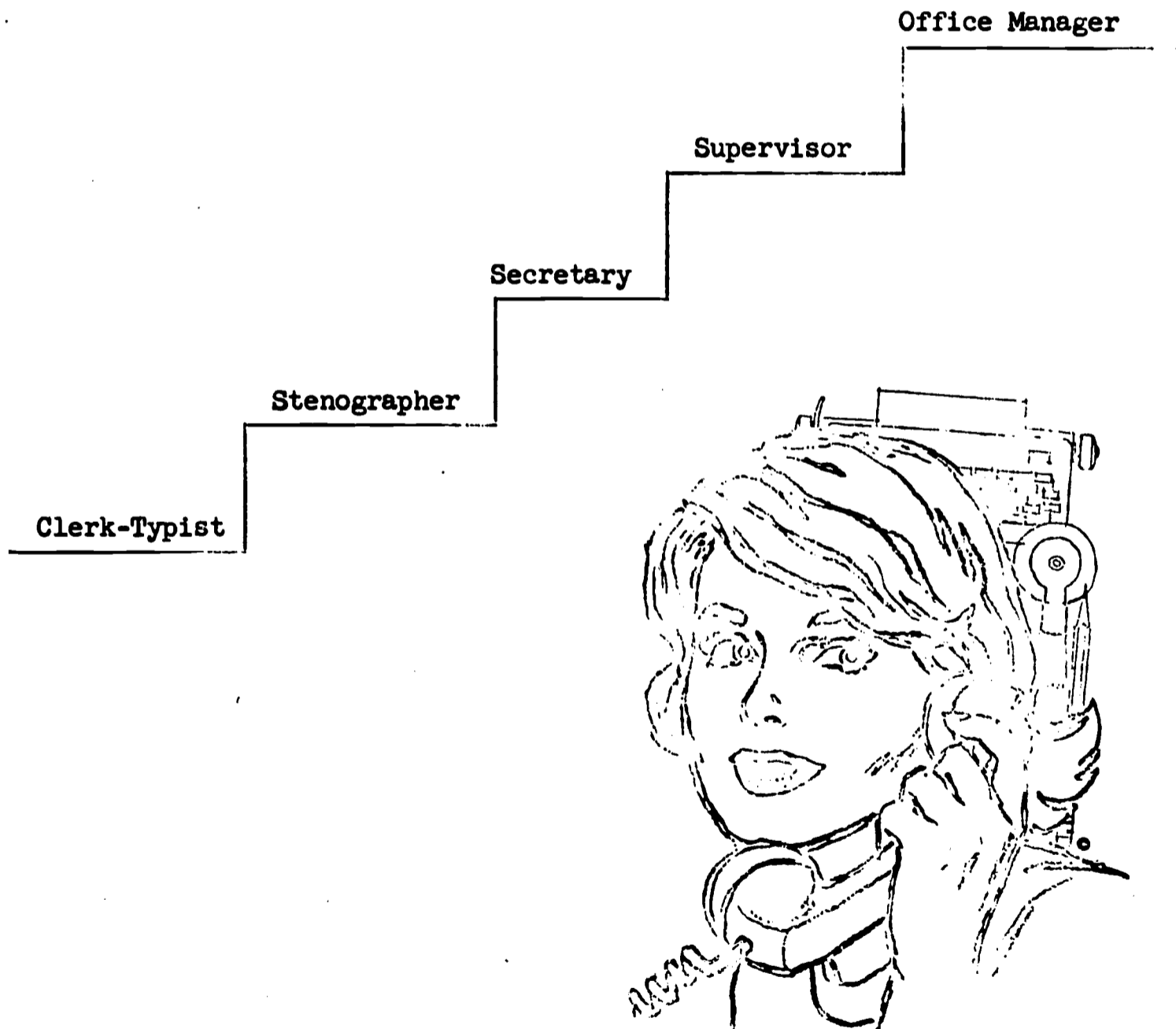
**Vocational Information For Education and Work**

Clerk-Typist - DOT Code 209.588  
(July 67)

IS THERE A NEED FOR CLERK-TYPISTS IN UTAH?

1. In 1965 there were 1,680 clerk-typists in Utah. It is predicted that by 1970 this number will increase to 1,894.
2. Well-trained clerk-typists are always in demand, with the need steadily rising. Competition is keen, but the well-trained clerk-typist will find ample opportunity.

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# YOU ARE A COMMERCIAL ARTIST

## WHAT DO COMMERCIAL ARTISTS DO?

### THEY DRAW, COLOR AND SKETCH:

1. Illustrations and cartoons for books, magazines, posters, billboards, catalogs and stories
2. Advertisements for newspapers, magazines and television. Fashion artists specialize in drawing clothing and models.

### THEY PREPARE MAPS, CHARTS AND DIAGRAMS.

### THEY DO LETTERING FOR BOOKS, LETTERHEADS, ENVELOPES, ETC.

### THEY DESIGN:

1. Food packages and wrappers
2. Labels
3. Home interiors
4. Window displays
5. Fashions
6. Greeting cards
7. Patterns for such articles as:
  - a. wallpaper
  - b. fabrics
  - c. linoleum
  - d. furniture

MOST COMMERCIAL ARTISTS SPECIALIZE IN ONE OF THE ABOVE AREAS.

### AS A COMMERCIAL ARTIST YOU WOULD

1. Begin your training by coloring other artists' designs, pasting pictures together for ads and doing other routine jobs.
2. Begin to develop your own style and technique
3. Draw your design from an actual model, from memory or from someone else's idea.

WHAT SHOULD COMMERCIAL ARTISTS BE LIKE?

## THEY SHOULD BE:

1. Imaginative
2. Artistic
3. Creative
4. Punctual at meeting deadlines
5. Fast

## THEY SHOULD HAVE:

1. Excellent eyesight
2. Good color discrimination
3. Good size and distance judgment
4. Eye-hand coordination
5. Self-confidence and enthusiasm

## THEY MUST BE ABLE TO:

1. Work under pressure and still do eye-catching work
2. Follow a budget, doing things as they are outlined. This means, often, they do not have complete artistic freedom.
3. Get along well with others. Many artists work together on different projects and must be able to accept each other's ideas.
4. Work alone without constant reminder.

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

1. Subjects that will help prepare you for this job are art and/or mechanical drawing, photography, printing, English, and lettering.
2. You will find it helpful to study current events and history so as to be familiar with new, as well as old, ideas.

## AFTER HIGH SCHOOL:

1. Artistic ability and originality are the most important requirements but few employers hire high school graduates just from seeing their work.
2. Most employers require from two to four years training at a commercial or vocational art school or in a college art department. Two year commercial art courses are available at Dixie College, Salt Lake Trade Tech., and Utah Trade Tech.

REMEMBER: Being able to draw well or paint beautiful pictures does not automatically qualify you to be a commercial artist. You need commercial art training.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the starting salary for commercial artists in Utah with no extra training other than high school was from \$200-\$250 a month. With additional training, their salary was from \$300-\$400 a month depending upon their skill and training.
2. After some years of experience, the average artist will make approximately \$600 a month whereas the highly creative artist may make as much as \$1,000-\$1,200 a month.
3. **THE FREE-LANCE ARTIST:** Many commercial artists work for themselves, instead of working for just one company. They do specific jobs for different companies that may only need their services temporarily. A good free-lance artist needs a lot of ambition and hustle to succeed since he must find the work and sell himself. However, he may make as much or more than the highest paid staff artist or even the art director himself. The work as well as the hours are generally irregular.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Full-time commercial artists are generally found in cities the size of Provo or larger, with the greatest majority found in large cities. In Utah, most opportunities are in the Salt Lake Valley.

**TYPE OF INDUSTRY:**

1. You will most likely work for an advertising agency, a large retail store, a major newspaper, a printing and publishing firm, a food processing firm, a manufacturing company, a television studio or a commercial art studio.
2. As mentioned above, some commercial artists, called free-lance artists, work for many different companies as their services are needed.

**Vocational Information For Education and Work**

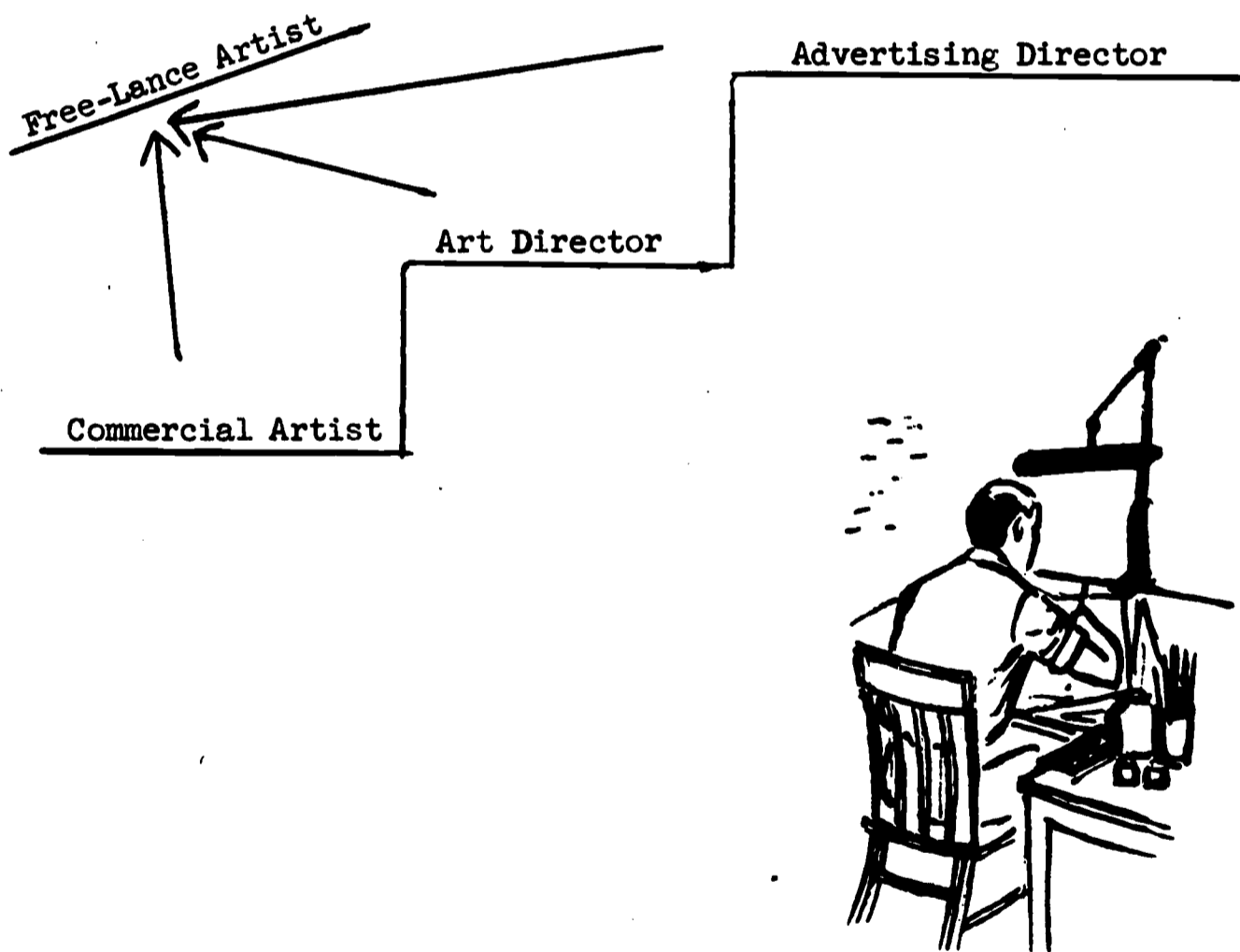
Commercial Artist - DOT Code 141.081  
(July 67)

IS THERE A NEED FOR COMMERCIAL ARTISTS?

In 1965 there were 190 commercial and technical artists in Utah. It is predicted that by 1970 this number will increase to 226.

CAN YOU ADVANCE?

Generally speaking, lines of promotion would be as shown below. A free-lance artist works for himself, and can either make a tremendous salary, or just peanuts. It all depends upon how good he is.



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**YOU ARE A COMPOSITOR****WHAT DO COMPOSITORS DO?**

**THEY SET WRITTEN MATERIAL IN TYPE AND GET IT READY FOR PRINTING BY:**

1. Deciding what size and style of type to use for each printing job
2. Setting each line of type, letter by letter, in a "composing stick" which holds the type in place
3. Putting spacers between words to balance the length of the line
4. Sliding the completed composing sticks onto a shallow metal tray called a galley
5. Making a test copy of the galley, proofreading it, and correcting any mistakes
6. Arranging and locking the galleys into page forms and sending them to the printing room
7. Cleaning the type after use and putting it back into its case

**THEY MAY ALSO:**

1. Operate a type setting machine (Typesetting Machine Operator) which sets type much faster than the Hand Compositor
2. Operate linotype machines (see job description of linotype operator) that have letters and characters on a keyboard like a typewriter
3. Operate machines that punch holes in strips of paper which are later used to operate automatic type setting machines
4. Operate machines that use a photographic process to print the material on film paper which is then reproduced
5. Specialize in any one single activity involved in the composing room



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WHAT SHOULD COMPOSITORS BE LIKE?

## THEY SHOULD BE:

1. Artistic
2. Proud of their work
3. Patient
4. Accurate
5. In good physical condition (some handicaps such as deafness will not prevent employment)

## THEY SHOULD HAVE:

1. An eye for design
2. Good finger coordination
3. Good eyesight
4. Good judgment of size
5. Mechanical ability

## THEY SHOULD BE ABLE TO:

1. Use good judgment in spacing words and letters
2. Follow written and verbal instructions accurately
3. Use basic arithmetic
4. Correct errors in spelling and grammar
5. Notice mistakes in writing and printing
6. Work carefully under pressure
7. Do detailed work

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are typing, photography, English (spelling), art, graphic arts, and mathematics.

## AFTER HIGH SCHOOL:

1. The best way to become a fully qualified compositor is to train for six years as an apprentice. During this time you will receive supervised on-the-job training and related classroom instruction.
2. Some workers learn the trade informally as helpers, but they do not advance as fast as the apprentice.
3. Utah Technical College, Salt Lake, offers a 12-month course in the skills of printing, including composition. Graduates of this course are in a good position to find work.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average pay for compositors was \$3.00 to \$3.75 an hour.
2. In some small print shops, compositors earned less than \$3.00 an hour.
3. Some compositors, working for large newspaper companies, earned more than \$3.75 an hour.
4. The starting pay for apprentices is \$1.50 to \$2.00 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions vary from place to place. Newer establishments are generally well-lighted, clean, and air conditioned.
2. Hand compositors stand for long periods to do their work.
3. Proofreaders and typesetters sit to do their work.
4. You may have to do some lifting of heavy page forms.
5. Some heat and noise are made by metal typesetting machines.
6. Depending upon the company for which you work, you may have to work late shifts or nights.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

About 80% of Utah's compositors work in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake, and Utah counties.

## TYPE OF INDUSTRY:

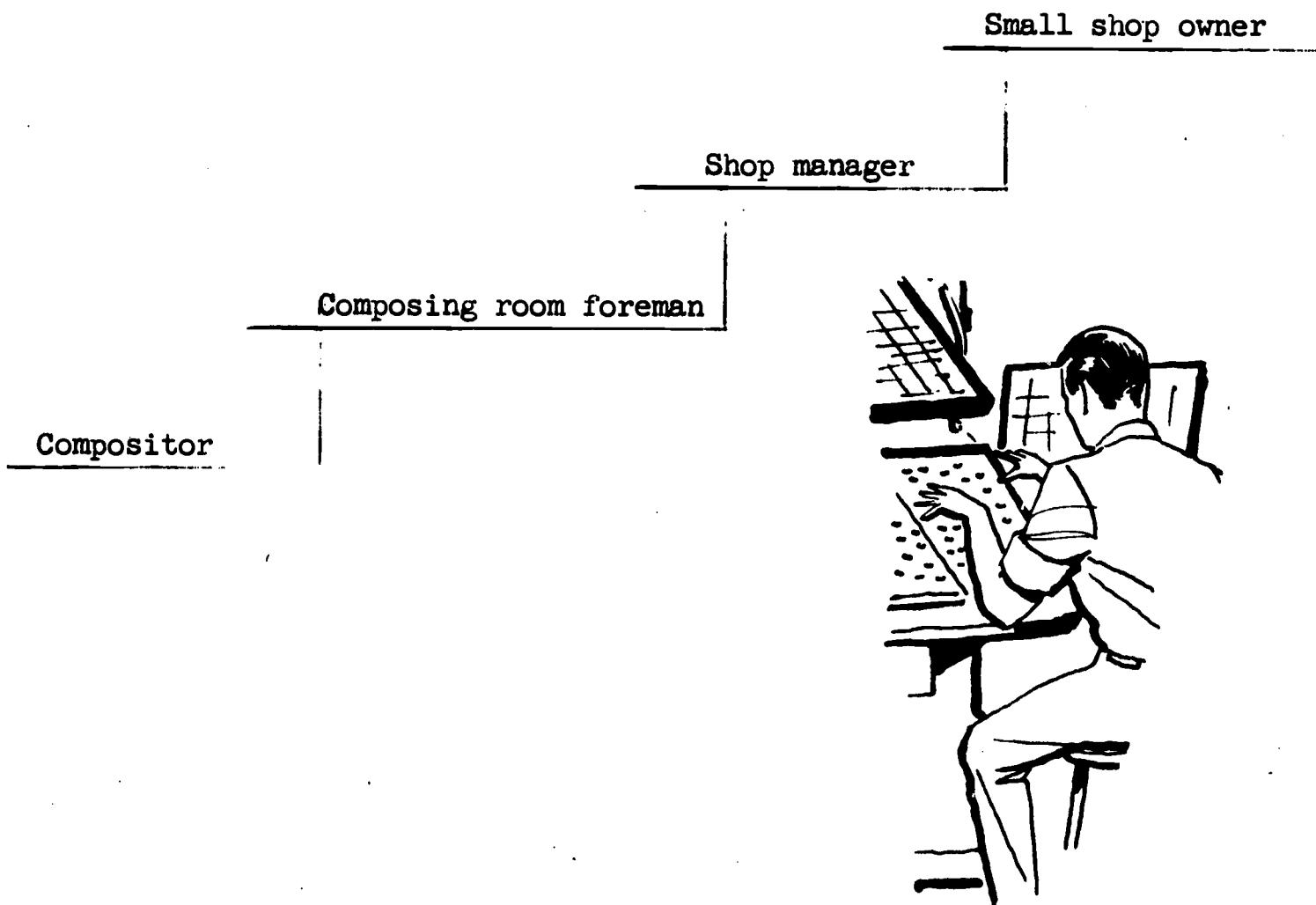
Newspaper companies, commercial printing shops, book and magazine printing companies, and advertising agencies employ the majority of compositors.

Vocational Information For Education and Work

Compositor - Dot Code 973.381  
(July 67)

IS THERE A NEED FOR COMPOSITORS IN UTAH?

1. In 1965 there were 574 compositors in Utah. It is predicted that by 1970 this number will decrease to 560.
2. The need for hand compositors will decrease as phototypesetting and other typesetting equipment becomes more widely used. The need for workers with photographic, electronic, and typing skills will increase.
3. Hand compositors will continue to do most of the work in small shops and on small, individual jobs.

CAN YOU ADVANCE?

**Prepared Cooperatively By:**  
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**YOU ARE A COMPUTER PROGRAMMER****WHAT DO COMPUTER PROGRAMMERS DO?**

THEY USE A COMPUTER TO SOLVE CLERICAL, STATISTICAL, OR ADMINISTRATIVE PROBLEMS:

1. THEY MUST FIRST DECIDE WHAT THE PROBLEM INVOLVES BY:
  - A. Determining how the required information is to be used
  - B. Finding what information is available to feed into the computer
  - C. Deciding exactly what the job is that must be done.
  
2. THEY ANALYZE THE INFORMATION TO BE USED BY:
  - A. Considering the information already on the computer tapes to determine if it can be used
  - B. Outlining one or more methods of solving the problem by considering the limitations of the particular computer
  - C. Making charts and diagrams to show how the information will go through the computer.
  
3. AFTER DEVELOPING A PLAN, THEY PREPARE INSTRUCTIONS TO COMPLETE THE PLAN BY:
  - A. Determining what mathematical operations must be performed
  - B. Preparing line-by-line instructions of how to solve the problem
  - C. Putting these instructions on special cards or tapes that can be fed into the computer.
  
4. THEY TEST THE PLAN BY:
  - A. Having other programmers check the plan for logical errors
  - B. Running the plan or "program" through the computer to see if the correct results will be obtained.

WHAT SHOULD COMPUTER PROGRAMMERS BE LIKE?

## THEY SHOULD BE:

1. Accurate
2. Patient and persistent
3. Imaginative
4. Above average in intelligence

## THEY SHOULD HAVE:

1. Initiative
2. Good judgment
3. A concern for detail
4. Good eye-hand coordination

## THEY SHOULD BE ABLE TO:

1. Sit for long periods of time
2. Think logically
3. Express themselves clearly in writing and speech
4. Use mathematics to solve problems

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are mathematics, business courses, science courses, and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is required.
2. Training in computer programming at a college is almost essential. Brigham Young University, University of Utah, Utah State University and Weber State College offer courses in computer science. Most employers require at least two years of college training.
3. Some programmers have obtained positions by working with computers in the military services.
4. Many employers require a degree from a four-year college.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 computer programmers in Utah earned from \$450 to \$700 per month.
2. Their starting salary was \$400 per month.
3. Some computer programmers earned as much as \$850 per month.

WHAT ARE WORKING CONDITIONS LIKE?

1. The work requires concentration and attention to detail.
2. The programmer will spend much of his time in a quiet, secluded office, free from distractions. When he works around the computer, though, there is a great deal of noise and activity.
3. Difficult problems may require a high degree of ability to reason while applying mathematical principles.
4. Programmers may be required to remain "on call" in case an emergency arises.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most computer programmers in Utah work in and around Salt Lake City, Ogden, and Provo.

## TYPE OF INDUSTRY:

Federal and state governmental agencies, and large corporations employ the majority of computer programmers.

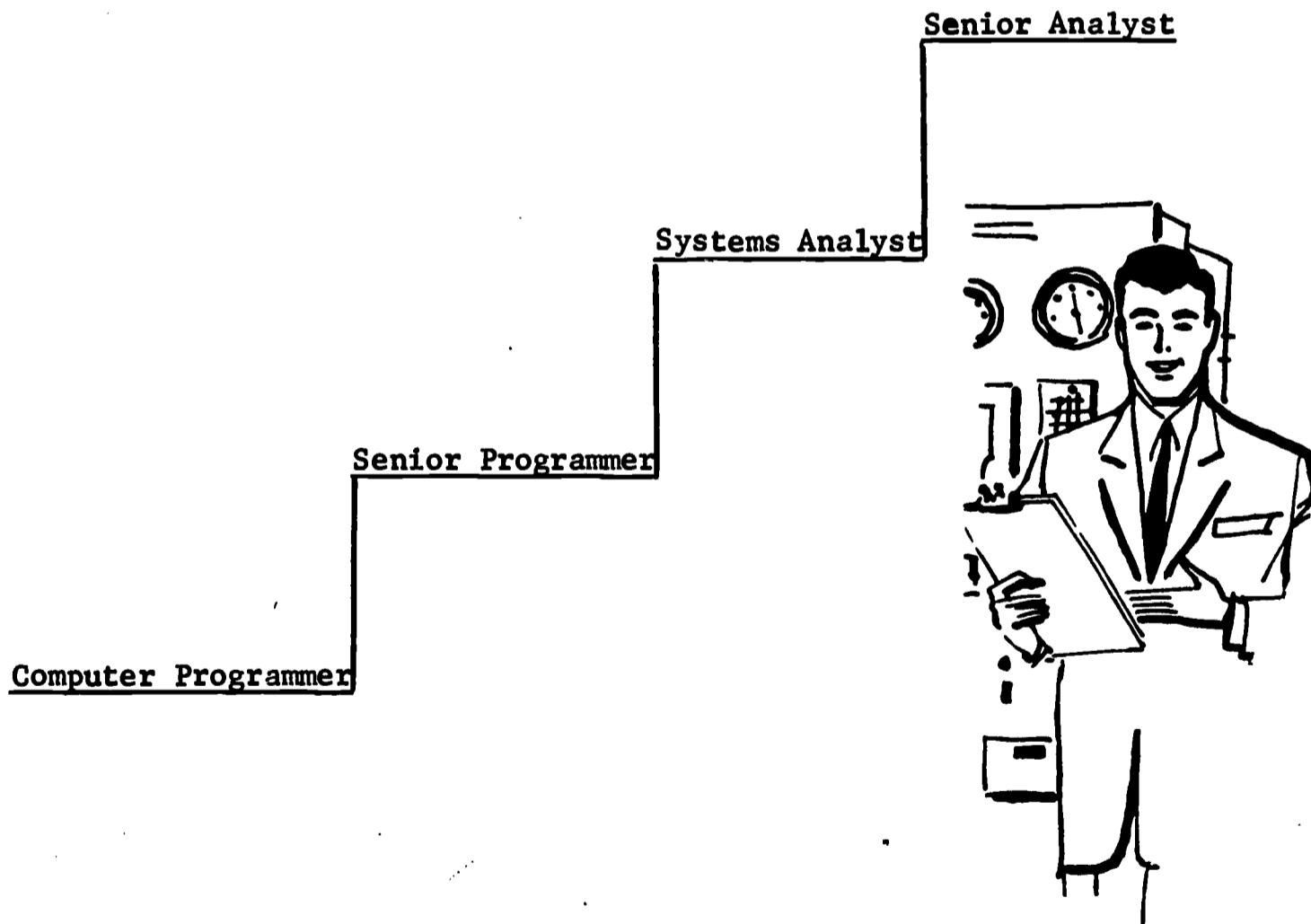
Vocational Information For Education and Work

Computer Programmer- DOT Code 020.188  
(July 1967)

IS THERE A NEED FOR COMPUTER PROGRAMMERS IN UTAH?

1. In 1965 there were 160 programmers in Utah. It is predicted that by 1970 this number will increase to 200.
2. This occupation is expanding very rapidly, and the need for programmers is expected to rise rapidly in the future.

CAN YOU ADVANCE?



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## YOU ARE A COOK

WHAT DO COOKS DO?

## THEY PREPARE FOOD BY:

1. Washing, peeling, trimming, and cutting vegetables
2. Cutting and boning meat, fish, and poultry

## THEY:

1. Cook food by frying, baking, broiling, or roasting it
2. Season food for proper taste
3. May take customers' orders, serve the food, and may wash dishes and clean the kitchen in smaller eating establishments.

## THEY MAY ALSO PREPARE:

1. Soups, salads, and desserts
2. Sauces, gravies, and dressings

## THERE ARE SEVERAL KINDS OF COOKS:

1. Fry cooks use a grill to fry food. Many of them work in drive-ins or smaller restaurants.
2. Breakfast cooks are specialists at preparing all types of breakfast food.
3. Vegetable cooks determine the quantity of vegetables needed, and prepare and cook vegetables that other cooks use.
4. Dinner cooks prepare hot sauces, soups, meats, fish, poultry, and casserole dishes.
5. The executive chef may do no cooking himself, but supervises other cooks, plans menus, and purchases the food supplies. He is actually part of the management of a restaurant or hotel.



WHAT SHOULD COOKS BE LIKE?

## THEY SHOULD BE:

1. Free from any communicable disease
2. Clean and neat
3. Proud of their work
4. In good physical condition

## THEY SHOULD HAVE:

1. A good memory
2. A good sense of taste
3. A sincere desire to learn

## THEY SHOULD BE ABLE TO:

1. Do strenuous work
2. Stand for long periods of time
3. Tolerate heat well
4. Work under pressure
5. Do heavy lifting occasionally

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are home economics, health courses, and any courses dealing with food.

## AFTER HIGH SCHOOL:

1. Most Utah employers prefer a high school education. At the present time there are no specific training courses offered. (Courses may be established in the future if there are interested applicants.) College courses in nutrition, dietetics, and home economics are helpful. Some college education makes advancement possibilities better.
2. Most cooks in Utah learn on the job as a fry cook in a small restaurant or drive-in, or learn from a related job such as dish washer, or kitchen helper.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average wage for a dinner cook in Utah was about \$2.25 per hour.
2. The fry cook's starting salary was from \$1.25 to \$1.50 per hour.
3. A few very capable cooks earned as much as \$5.50 per hour.
4. The pay scale is higher for men than for women in most cases.

WHAT ARE WORKING CONDITIONS LIKE?

1. Modern hotels and restaurants have adequate work areas which are well equipped. Smaller restaurants and drive-ins may have crowded work areas and poor equipment. Ventilation may not be adequate, and a temperature of 100 degrees is common.
2. Hazards of the work include working with sharp knives and the possibility of burns from steam, hot stoves, or spilled food. Falls may be caused from slipping on wet or greasy floors. Sudden changes in temperature may cause illness.
3. Working late at night and on week-ends is often required, but the more skillful cooks are usually given better hours.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

About 70% of the cooks in Utah work in eating establishments located in Davis, Salt Lake, Utah, and Weber counties. About 28% of the cooks in Utah are in Salt Lake City and the surrounding area.

## TYPE OF INDUSTRY:

Over 50% of the cooks in Utah are employed by the Utah public schools' hot lunch program. Cooks work in hospitals, hotels, restaurants, drive-ins, airlines, railroads, and in all other types of eating places.

Vocational Information For Education and Work

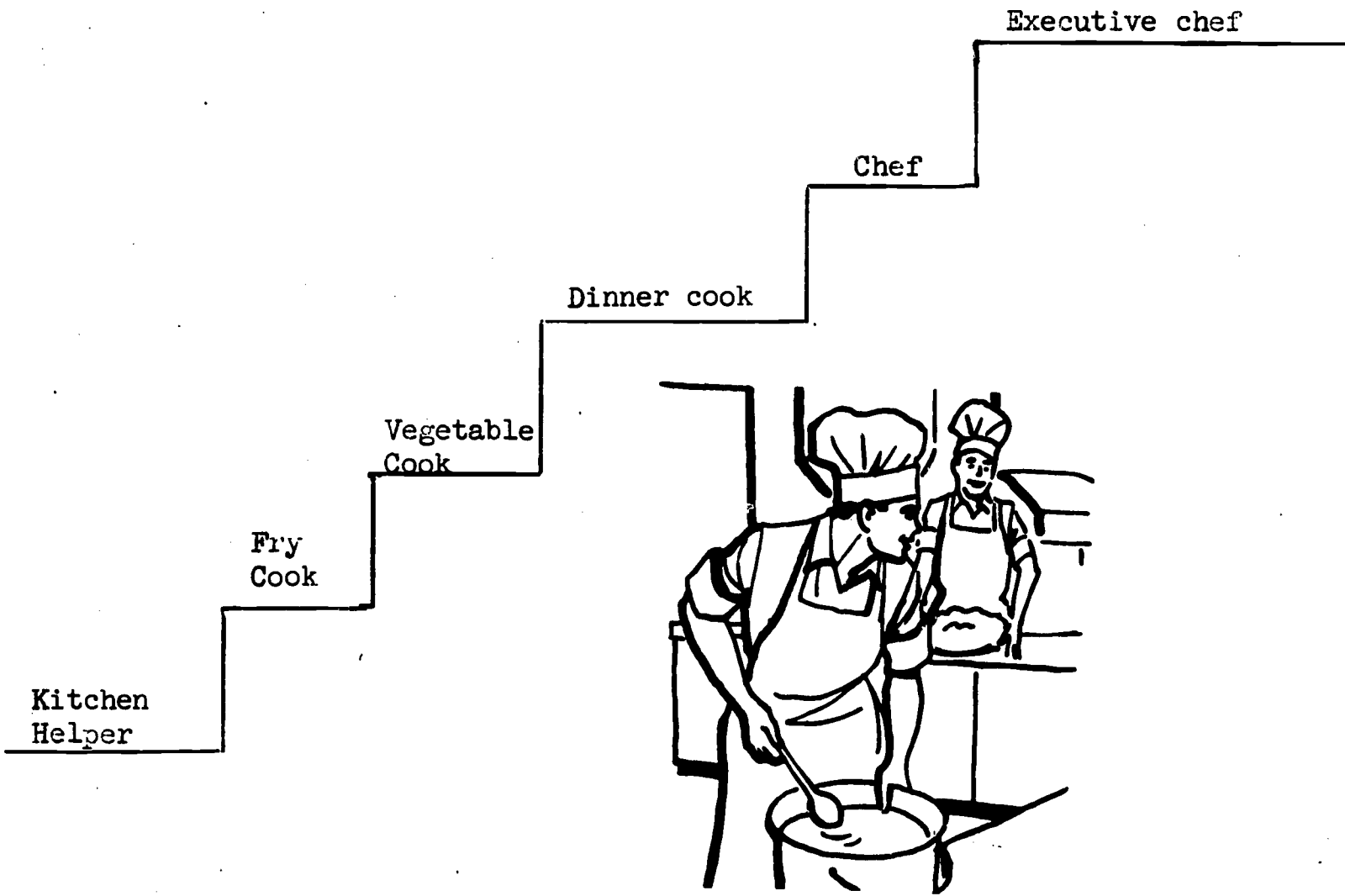
Cook - DOT Code 313.381  
(July 67)

IS THERE A NEED FOR COOKS?

1. In 1965 there were 3,308 cooks in Utah. By 1970 it is predicted that there will be 4,365.
2. During the next ten years the employment opportunities for cooks will be excellent. New restaurants and hotels which are opening will increase the need for capable cooks. The outlook for cooks with less experience is not quite as good.

CAN YOU ADVANCE?

Opportunities for advancement are very limited for women. The better restaurants and hotels employ men almost exclusively.



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YOU ARE A CONSTRUCTION EQUIPMENT  
OPERATOR

WHAT DO CONSTRUCTION EQUIPMENT OPERATORS DO?

THEY:

1. Operate various types of machinery such as bulldozers, concrete mixers, tractors, cranes, paving machines and backhoes
2. Generally specialize in one of three jobs: operating grading and paving equipment, operating hoists, shovels and cranes, and operating mixing and crushing machines
3. Must skillfully operate a number of complex controls
4. Make minor repairs and adjustments on the machines they operate
5. Judge proper tension for the belts, controls, and chains that are on the machine

THEY PERFORM VARIOUS JOBS, SUCH AS:

1. Build roads and highways
2. Build bridges of various sizes
3. Build dams, pipelines, and buildings

WHAT SHOULD CONSTRUCTION EQUIPMENT OPERATORS BE LIKE?

**THEY SHOULD BE:**

1. Strong and in good health
2. Mentally alert
3. Mechanically inclined
4. Willing to work hard

**THEY SHOULD HAVE:**

1. Good eye-hand-foot coordination
2. Good size and distance judgment
3. Good muscular coordination
4. Good vision and hearing

**THEY SHOULD BE ABLE TO:**

1. Judge distances accurately
2. Think and react quickly
3. Work well with their hands

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are shop classes, with automotive classes being most helpful. Some mathematics may be useful.

**AFTER HIGH SCHOOL:**

Most employers prefer to hire high school graduates.

Operators are usually trained on the job on small, less complicated equipment.

Sometimes an oiler, who takes care of the equipment, or a construction laborer becomes an equipment operator through experience, or is taught by an experienced equipment operator.

There is no apprentice program available in Utah.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 construction equipment operators operating simpler machines made \$3.32 an hour.
2. The operators who ran the more difficult machines made as much as \$5.75 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Nearly all the work is done out-of-doors.
2. Equipment operators may be required to live at or near the site of construction projects that are isolated from the comforts of the city. Housing is often very difficult to find, and may be of poor quality.
3. Operating heavy equipment may be very tiring, and physical discomfort will be experienced frequently.
4. The work can be dangerous, and serious accidents sometimes occur.
5. Jobs may not last very long, and employees must change location frequently.
6. Storms and weather conditions may cause employment layoffs with no pay. Work is difficult to find during the winter months.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Construction operators work in all parts of the state, wherever there is a construction project underway. They may work in the largest city or in the most isolated part of the desert.

## TYPE OF INDUSTRY:

Construction equipment operators work on all types of construction projects such as roads, bridges, buildings, pipelines, dams, wrecking sites, etc.

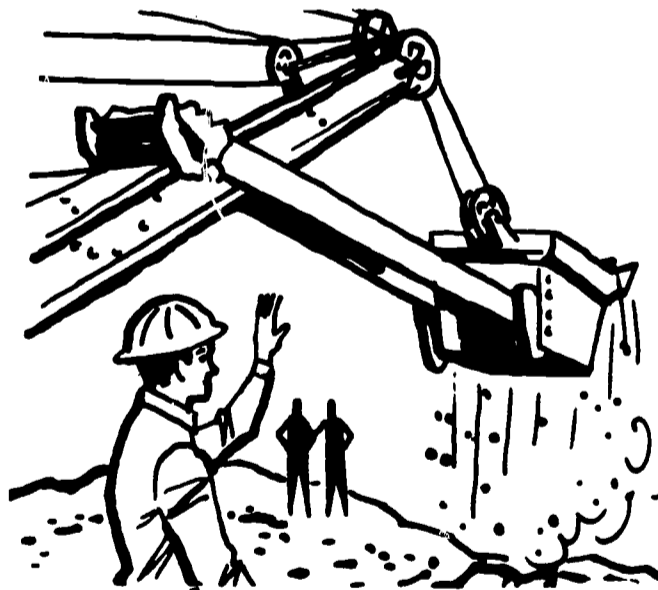
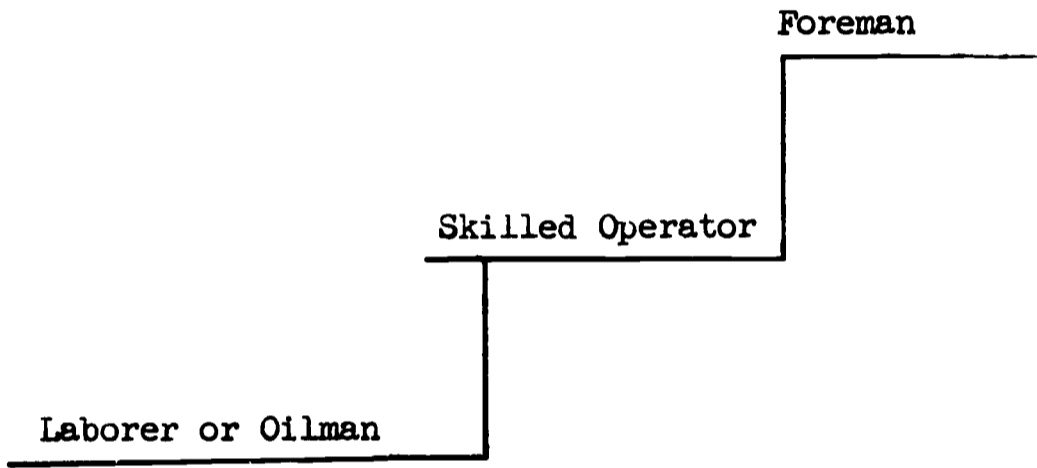
Vocational Information For Education and Work

Construction Equipment Operator - DOT Code 859.883  
(July 67)

IS THERE A NEED FOR CONSTRUCTION EQUIPMENT OPERATORS IN UTAH?

In 1965 there were 1,832 construction equipment operators in Utah. It is predicted that by 1970 this number will increase to 2,136.

CAN YOU ADVANCE?



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**YOU ARE A CRANEMAN****WHAT DO CRANEMEN DO?****THEY:**

1. Skillfully operate cranes and hoists to move materials.
2. Manipulate various pedals and levers to rotate the crane and raise and lower the crane boom and the loadline.
3. Operate various machinery, that may be attached to the crane, such as buckets for excavation, pile drivers to drive posts into the ground, and wrecking balls for demolition work.
4. Follow visual or mechanical signals when they cannot see the attachments they operate.

**THEY MAY ALSO:**

1. Run the crane along tracks that form an overhead bridge
2. Grease and lubricate their equipment and make minor repairs
3. Operate different types of cranes such as bridge cranes, gantry cranes, monorail cranes, locomotive cranes, truck cranes, portable cranes, and others
4. Operate cranes that are capable of lifting 125 tons as high as a 33 story building.



WHAT SHOULD CRANEMEN BE LIKE?

## THEY SHOULD BE:

1. Strong and in good health
2. Mentally alert
3. Mechanically inclined
4. Willing to work hard
5. Dependable

## THEY SHOULD HAVE:

1. Good eye-hand-foot coordination
2. Good size and distance judgment
3. Good muscular coordination
4. Good vision and hearing

## THEY SHOULD BE ABLE TO:

1. Judge distance accurately
2. Think and react quickly
3. Judge proper load size
4. Work well with their hands

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are all shop classes, science courses, mathematics, and English.

## AFTER HIGH SCHOOL:

1. Most Utah employers require a high school diploma.
2. The best way to train for this job is as an apprentice. As an apprentice you will receive on-the-job training, plus related classroom instruction. After three years as an apprentice, you may become a fully qualified worker called a journeyman.
3. Some cranemen have received jobs as helpers. Opportunities for helpers are not nearly as good as for apprentices.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the union wage for cranemen in Utah was \$4.02 per hour for operators who ran the simpler machines.
2. The starting salary for apprentices was \$2.40 per hour.
3. Cranemen who operated the more complex machines made as much as \$5.75 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

Crane operators work outdoors and may be exposed to bad weather, but many of them are protected by a small cab.

The work may be dangerous and serious accidents sometimes occur.

Operating cranes may be tiring and physical discomfort is often experienced.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

One-third of Utah's crane operators are employed in the Provo-Orem area, and one-third are employed in the Salt Lake area. The other third are scattered throughout the state. Highway projects and the building of dams sometimes require working in remote areas.

## TYPE OF INDUSTRY:

Most crane operators in Utah work in the metal manufacturing industry. Others are employed on various construction projects, such as building construction or demolition.

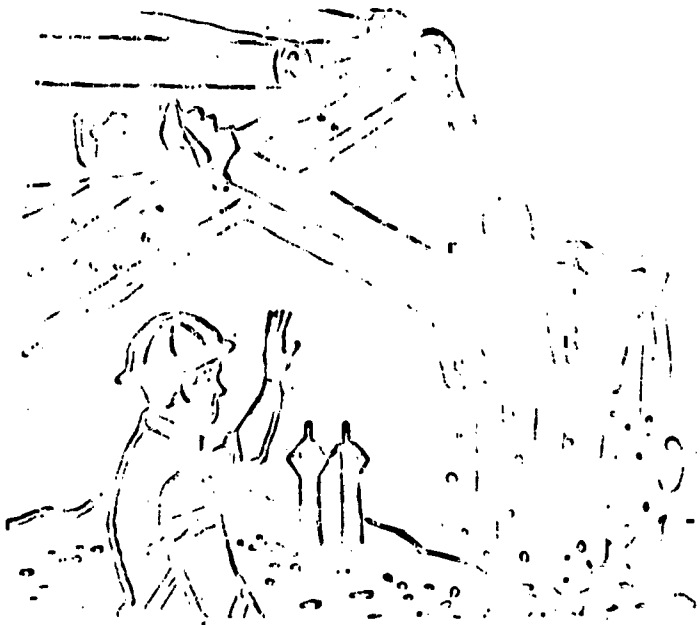
Vocational Information For Education and Work

Craneman -- DOT Code 921.883 (July 1967)

IS THERE A NEED FOR CRANEMEN?

In 1965 there were 72 cranemen in Utah. It is predicted that by 1970 this number will increase to 75.

CAN YOU ADVANCE?



Foreman

Journeyman Crane Operator

Apprentice Craneman

**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



# YOU ARE A DARKROOM TECHNICIAN

## WHAT DO DARKROOM TECHNICIANS DO?

THEY PROCESS EXPOSED FILM THROUGH THE NECESSARY STEPS TO MAKE A COMPLETED PRINT BY:

1. Preparing a chemical solution used in developing the film and keeping it at the correct strength and temperature.
2. Placing the film in the chemical solution to develop the negative, then hanging it to dry
3. Enlarging the dry negative, figuring out the exposure time and type of paper to be used
4. Shining a light through the negative on to a sheet of photographic paper to make the print
5. Using other chemical solutions to develop the print, watching each stage with special care so that any mistakes can be corrected.

THEY TOUCH UP THE PRINT USING A VERY FINE PAINT BRUSH AND SPOTTING DYES.

THEY MAY ALSO TALK TO CUSTOMERS ABOUT THE TYPE OF PICTURE DESIRED.

EQUIPMENT THEY USE INCLUDES:

1. Photographic enlargers, film and print driers, film and print washers, and developing tanks and trays
2. In some establishments, a processing machine that is a complete self-contained darkroom

WHAT SHOULD DARKROOM TECHNICIANS BE LIKE?

**THEY SHOULD BE:**

1. Patient and persistent
2. Artistic
3. Precise in their work
4. Original
5. In good health

**THEY SHOULD HAVE:**

1. Good finger coordination
2. Mechanical ability
3. Normal vision
4. Good color vision;  
cannot be color blind

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

1. Subjects that will help prepare you for this job are photography, mathematics, chemistry, drawing, color theory, and English.
2. Photography as a hobby and membership in your school's photography club will also be helpful.

**AFTER HIGH SCHOOL:**

1. Most employers require a high school diploma but no additional schooling. Interest in the work and a willingness to learn are considered just as important. You will receive your training on the job.
2. Many photographers begin as darkroom technicians. If you plan on eventually becoming a photographer, it would be helpful to take classes in photography. They are offered at all colleges, junior colleges, art schools, and vocational schools.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 Darkroom Technicians in Utah made from \$220 - \$550 a month depending upon their experience and the length of time employed.
2. Their salary was from \$1.25 - \$1.50 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. The average photographic laboratory is a comfortable work place in spite of a slight odor of chemicals. It is well lighted and ventilated except for the darkroom where conditions of total darkness or little lighting exist.
2. The darkroom technician usually divides his time between the laboratory and the darkroom. Some helpers spend most of their time in almost complete darkness where the developing, fixing, and printing are done.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most darkroom technicians work in cities whose population is over 5,000. In Utah, most of the job opportunities are found in Salt Lake, Utah, Davis, Weber, and Box Elder Counties.

## TYPE OF INDUSTRY:

1. Large industries such as Kennecott, Thiokol, U.S. Steel and others have their own staff of darkroom technicians.
2. Private portrait studios, commercial studios, advertising agencies, and blueprint and photocopying establishments employ the majority of darkroom technicians.

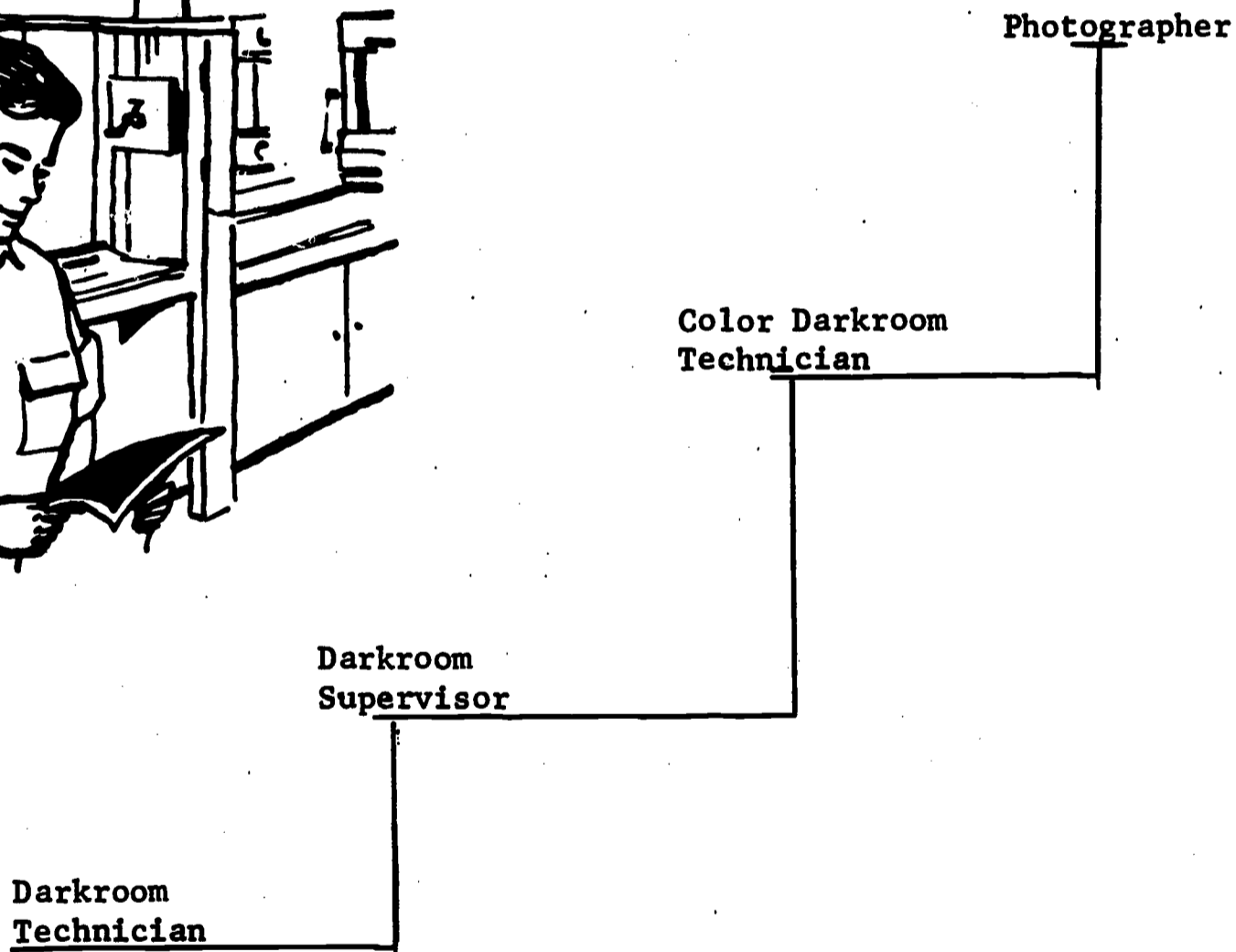
**Vocational Information For Education and Work**

Dark Room Technician - DOT CODE 976.381  
(July 1967)

IS THERE A NEED FOR DARKROOM TECHNICIANS?

1. In 1965 there were 98 darkroom technicians in Utah. It is estimated that by 1970 this number will increase to 149.
2. The need for darkroom technicians will continue to rise due to the increase in photography as a hobby.

CAN YOU ADVANCE?



Prepared Cooperatively By:  
 Utah State Board of Education  
 Utah State Department of Employment Security



## YOU ARE A DENTAL ASSISTANT

WHAT DO DENTAL ASSISTANTS DO?

## THEY PREPARE PATIENTS FOR TREATMENT OR EXAMINATION BY:

1. Greeting the patient and obtaining necessary information for the records
2. Seating the patient in the dental chair and adjusting it to the proper position
3. Fastening a towel around the patient's neck to protect his clothing
4. X-raying the patient's teeth as directed by the dentist and developing the film
5. Sterilizing the instruments to be used and arranging them, along with any necessary medicine, on the dentist's tray

## THEY ASSIST THE DENTIST DURING TREATMENT BY:

1. Handing him the instruments he needs
2. Keeping the patient's mouth clean by using suction tubes, water sprays, and cotton swabs
3. Mixing materials for fillings and measuring out the correct amount

## THEY MAY ALSO:

1. Act as a receptionist and schedule appointments
2. Keep records, type, send out bills, and collect payments
3. Order supplies
4. Do some lab work such as preparing the material the dentist uses to make impressions or models of the patient's teeth
5. Give instructions to patients concerning the care of their teeth



WHAT SHOULD DENTAL ASSISTANTS BE LIKE?

## THEY SHOULD BE:

1. Interested in medical work
2. Neat and clean
3. Even tempered
4. Alert
5. Patient

## THEY SHOULD HAVE:

1. Good eyesight and hearing
2. A nice appearance
3. A pleasing smile and voice
4. Good finger coordination

## THEY SHOULD BE ABLE TO:

1. Follow instructions well
2. Stand for long periods of time
3. Get along well with others

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are English, science, typing, bookkeeping and office practice.

## AFTER HIGH SCHOOL:

1. Some employers require a high school diploma but no additional schooling. You will receive your training on the job.
2. Utah Trade Tech. in Provo offers a twelve month course for dental assistants. Your chances of finding a job are much better if you are a graduate of this course.
3. Some college or business school training will also help your chances of finding a job.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average salary for dental assistants in Utah was from \$300-\$325 a month.
2. Their beginning salary was from \$200-\$265 a month, depending upon their qualifications.
3. Some experienced dental assistants make as much as \$400 a month.

WHAT ARE WORKING CONDITIONS LIKE?

1. The dentist's office is generally a pleasant, comfortable, quiet place to work.
2. You will be on your feet, moving around, much of the day.
3. You may work with just the dentist or with other assistants and technicians, depending upon the size of the office.
4. You may be the only assistant in a small one-girl office or part of a staff working for several dentists in a large group of offices.
5. Dentist offices are located in downtown office buildings, suburban shopping centers, clinics, and some hospitals.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Anywhere there is a dentist, there will be need of a dental assistant. Most opportunities, however, are found in the Salt Lake valley area.

**Vocational Information For Education and Work**

Dental Assistant - DOT Code 079.378  
(July 67)

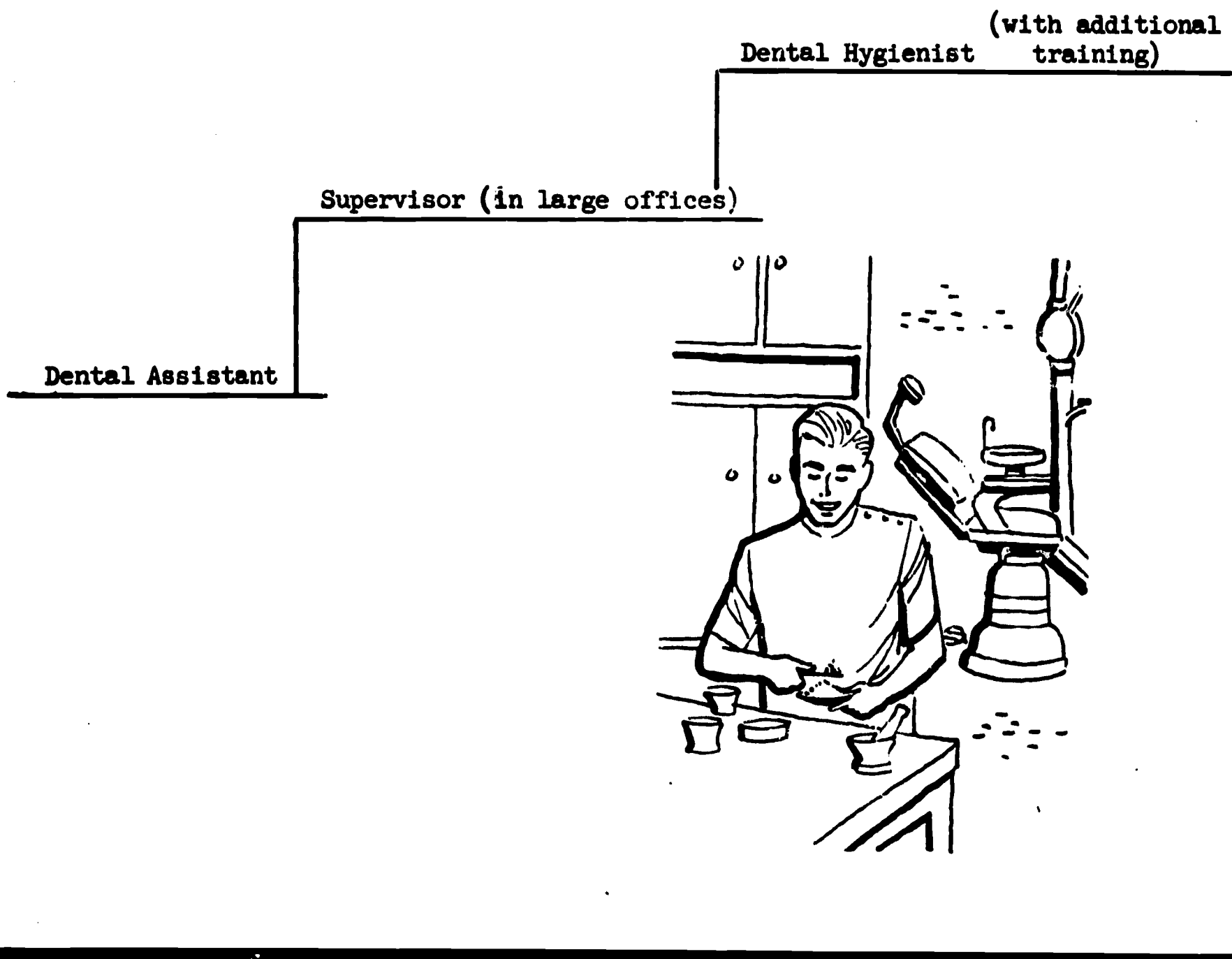
IS THERE A NEED FOR DENTAL ASSISTANTS?

In 1965, there were 600 dental assistants in Utah. It is predicted that by 1970, this number will increase to 1,000.

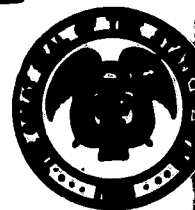
There is a high turnover of dental assistants due to many who leave to marry or raise families.

This field is mainly for women.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



YOU ARE A DENTAL TECHNICIAN

WHAT DO DENTAL TECHNICIANS DO?

THEY MAKE FALSE TEETH, CROWNS, AND BRIDGES FOR DENTAL PATIENTS.

THEY:

1. Work from a prescription and an impression of the patient's mouth supplied by the dentist
2. Form models of teeth in hard stone, wax, or plaster
3. Make molds out of metal into which they put ceramic, porcelain, or plastic to build the false teeth
4. Arrange the teeth in their setting and polish them
5. Make bridges out of gold and other metals
6. Make metal and porcelain crowns or inlays for partially destroyed teeth

THEY MAY ALSO MAKE:

1. Braces to correct crooked teeth
2. Devices to help correct cleft palates
3. Any type of dental appliance ordered by the dentist

THEY REPAIR BROKEN DENTURES.

THEY MAY SPECIALIZE IN ANY OF THE ABOVE MENTIONED AREAS.

WHAT SHOULD DENTAL TECHNICIANS BE LIKE?

**THEY SHOULD BE:**

1. Patient
2. Interested in doing detailed work
3. Artistic
4. (May be physically handicapped, as long as they have good use of hands and fingers)

**THEY SHOULD HAVE:**

1. Good mental health
2. Normal hearing
3. Good color vision and perception
4. Very good finger coordination
5. Good eye-hand coordination
6. A feel for proportion

**THEY SHOULD BE ABLE TO:**

1. Do accurate work
2. Use their eyes constantly
3. Work for long periods of time while sitting
4. Concentrate on fine details

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are chemistry, anatomy, physiology, English, arts and crafts, ceramics, plastics, and metalworking.

**AFTER HIGH SCHOOL:**

A high school diploma is necessary. In many areas of the country, a two year training course is available. In Utah, all training is obtained on the job, and it may last from three to four years. To be a fully qualified dental technician, you must pass an examination.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, dental technicians in Utah made from \$400-\$700 a month, depending upon their skill and experience.
2. Their starting salary as fully qualified technicians was from \$300-\$400 a month.
3. Trainees made from \$200-\$275 a month.
4. Some highly skilled specialists may make as much as \$800 a month.

WHAT ARE WORKING CONDITIONS LIKE?

1. You will not deal directly with the public, but will receive prescriptions from dentists.
2. You will spend most of your day working at a bench.
3. You may receive minor cuts or injuries.
4. Even though there is sometimes pressure from the dentists to complete a job, your laboratory is generally a relaxed place in which to work.
5. You may work for either a small commercial laboratory having only two to four technicians who handle orders from any dentist, a large laboratory serving many dentists, an individual dentist, or for a hospital that provides dental services.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Almost all dental technicians work in large cities such as Salt Lake or Ogden.

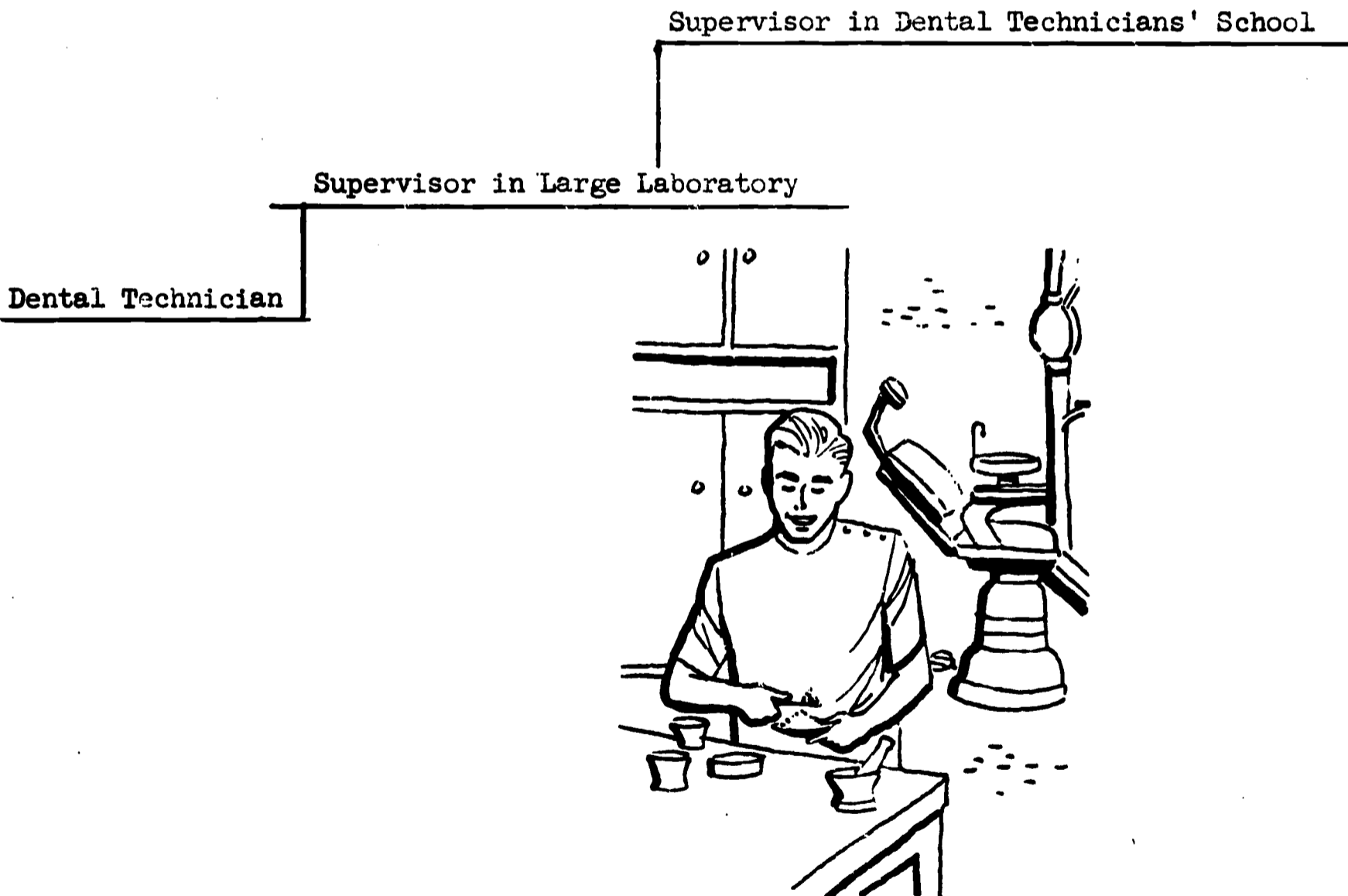
**Vocational Information For Education and Work**

Dental Technician - DOT Code 712.381  
(July 67)

IS THERE A NEED FOR DENTAL TECHNICIANS?

1. In 1965, there were 87 dental technicians in Utah. It is predicted that by 1970 this number will increase to 149.
2. The demand for dental technicians will continue to rise because of the greater number of old people, the higher income level of most people, and the greater concern for personal appearance.
3. Opportunities in this field are mostly for men.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## YOU ARE A DIESEL MECHANIC

### WHAT DO DIESEL MECHANICS DO?

THEY MAINTAIN AND REPAIR DIESEL ENGINES.

THEY:

1. Inspect and test engine parts to locate the cause of any trouble
2. Repair or replace the defective parts
3. Make periodic checks and adjustments to keep trouble from developing
4. Lubricate, clean, and tune up the engine.

THEY REBUILD DIESEL ENGINES.

THEY:

1. Take the engine apart
2. Examine the parts for defects
3. Repair or replace the defective parts
4. Put the engine back together and make any necessary adjustments.

THEY NEED TO KNOW ABOUT THE THEORY OF DIESEL POWER, FUEL INJECTION SYSTEMS, TURBOCHARGERS, ENGINE SPEED GOVERNORS AND OTHER PARTS NOT USUALLY FOUND IN OTHER TYPES OF ENGINES.

THEY MAY ALSO:

1. Repair equipment connected with diesel engines
2. Repair large natural gas engines
3. Specialize in the type of engine they work with. Diesel engines are found in large trucks and buses; construction equipment such as bulldozers, earthmovers and cranes; farm equipment such as tractors and combines; ships, generators, pumps, and many types of equipment used in industry.



WHAT SHOULD DIESEL MECHANICS BE LIKE?

## THEY SHOULD BE:

1. Energetic
2. In good physical condition
3. Willing to do hard work
4. Patient
5. Proud of their work

## THEY SHOULD HAVE:

1. Good finger and hand coordination
2. Mechanical ability
3. Good vision for close work
4. Good hearing
5. Average physical strength

## THEY SHOULD BE ABLE TO:

1. Work well with others
2. Do strenuous work and handle heavy equipment
3. Work in awkward and cramped positions
4. Pay attention to detail.

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are machine shop practice, auto mechanics, science and mathematics.

## AFTER HIGH SCHOOL:

1. Although it is not absolutely necessary to be a high school graduate, your chances of finding work are much better if you are.
2. Salt Lake Trade Tech and Utah Trade Tech, in Provo, offer two-year courses in diesel mechanics. Employers prefer to hire graduates of these courses and will usually pay them more.
3. Many diesel mechanics begin as helpers to car and truck mechanics, working on gasoline engines for 3-4 years. When employed by companies using diesel engines, they are given 6-18 months training.
4. Some diesel mechanics begin by spending 3-4 years training as apprentices to heavy duty mechanics, maintenance mechanics, or others, to become journeymen. There is no apprenticeship program, at present, for diesel mechanics in Utah.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, diesel mechanics earned from \$3.50 to \$4.50 an hour depending upon their skill and training.
2. Their starting salary was from \$2.50 to \$3.50 an hour.
3. Diesel mechanics working on construction equipment average \$5.00 or more an hour. However, they are often laid off during the winter months.
4. Helpers working with other mechanics start at \$1.50 to \$2.50 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Work areas vary from large, well-lighted, well-ventilated shops to small, poorly-lighted, poorly-ventilated shops.
2. Most diesel mechanics work indoors. Some, such as mechanics who work on construction equipment, work out of doors in all kinds of weather.
3. There is danger of cuts, bruises and other common shop injuries that come from working with heavy equipment. Strict safety regulations reduce the number of accidents in most shops.
4. Much of your work is done on dirty, greasy equipment, and you will often have gas, oil, grease, and dirt on your hands, arms, face, and clothes.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most of Utah's diesel mechanics work in the Wasatch Front area (Box Elder, Davis, Weber, Salt Lake and Utah counties). Some travel to different parts of the state to repair farm equipment and construction equipment.

## TYPE OF INDUSTRY:

Construction companies, large bus and truck lines, the State Highway Department, and companies making and selling diesel engines employ the majority of diesel mechanics.

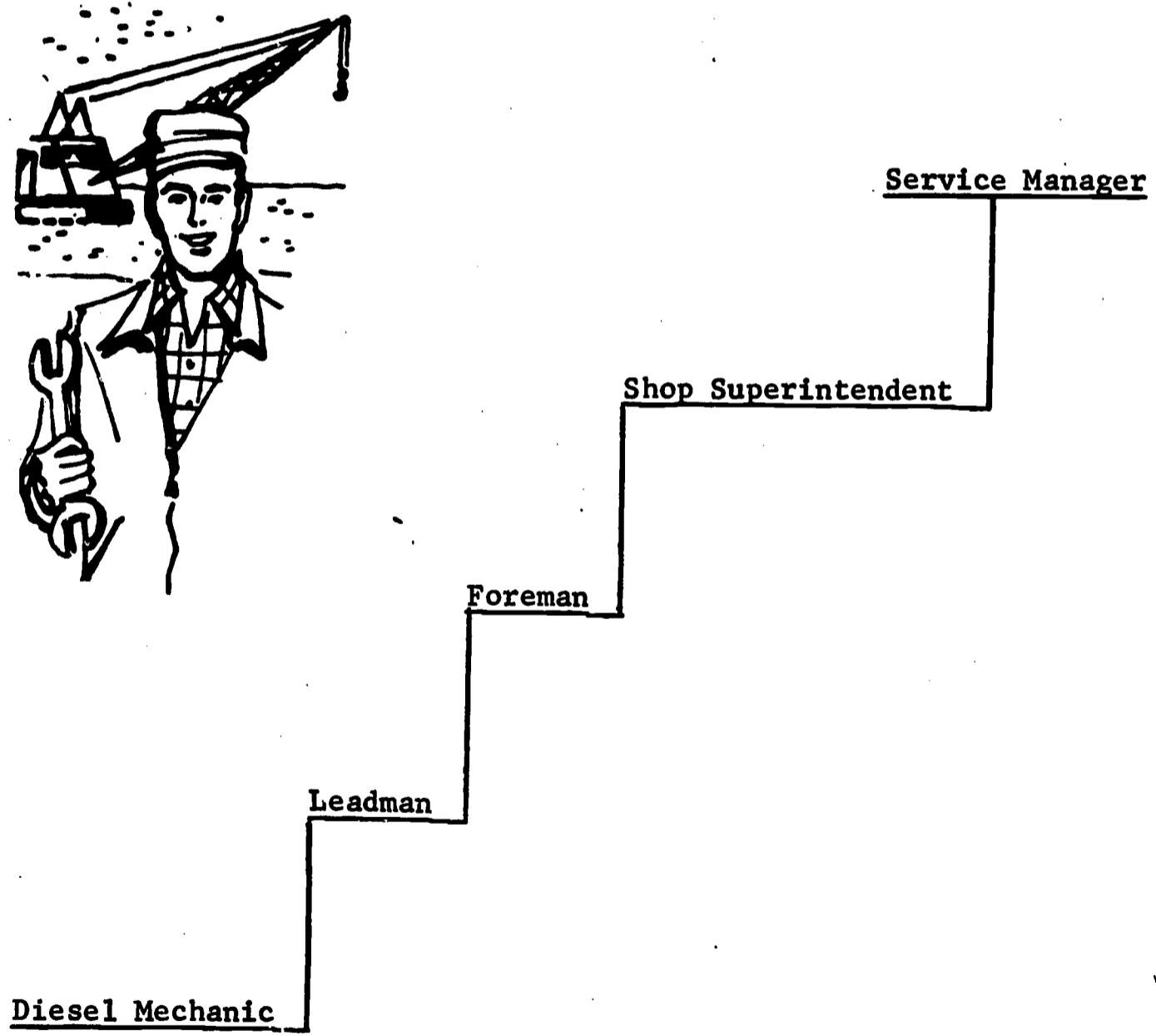
Vocational Information For Education and Work

Diesel Mechanic - DOT Code 526.781  
(July 1967)

IS THERE A NEED FOR DIESEL MECHANICS?

- 1. In 1965, there were 225 diesel mechanics in Utah. It is predicted, that by 1970, this number will increase to 275.
- 2. The need for diesel mechanics will continue to rise due to the replacement of gas engines with diesel engines in many types of equipment.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



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## YOU ARE A DRAFTSMAN

WHAT DO DRAFTSMEN DO?

## THEY:

1. Draw the plans for objects such as space capsules, television sets, bridges, and most other objects before the workers can make these objects.
2. Translate the ideas, rough sketches, and calculations of engineers, architects, and designers into working designs.
3. May calculate the strength, reliability, and cost of materials.
4. Draw maps that show what the surface of the land is like.
5. Use mathematics such as trigonometry and geometry to prepare the drawings for an object.

## THEY HAVE VARIOUS LEVELS OF RESPONSIBILITY:

1. Senior draftsmen use the ideas and information provided by the engineers and architects to draw to scale the objects that are to be built.
2. Detailers make clear and complete drawings of each part of the plan, giving the exact dimensions, and material to be used.
3. Checkers carefully examine drawings for errors.
4. Tracers prepare the drawings for reproduction by tracing them on transparent cloth, paper, or plastic film.

WHAT SHOULD DRAFTSMEN BE LIKE?

## THEY SHOULD BE:

1. Precise in their work
2. Patient
3. Neat
4. Proud of their work
5. Creative

## THEY SHOULD HAVE:

1. Good eye-hand coordination
2. Good judgment concerning size and distance
3. A concern for detail

## THEY SHOULD BE ABLE TO:

1. Do freehand drawings
2. Use their eyes in close work for long periods
3. Sit working alone for long periods
4. Follow both oral and written directions carefully

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mechanical drawing, freehand drawing, lettering, algebra, geometry, trigonometry, shop courses, and physical science courses.

## AFTER HIGH SCHOOL:

High school graduation is essential. Training in a trade school or college is almost always essential to obtain a job as a draftsman. The average trade school course lasts about 9 months. Two years of drafting in college will qualify you for a job with good advancement possibilities. Utah Technical College, Salt Lake, and Provo, offer a program in drafting. All of the colleges and junior colleges in Utah offer courses in drafting which will qualify you as a draftsman.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average draftsman in Utah made \$126 a week.
2. The beginning salary for draftsmen was \$95 a week.
3. Some draftsmen make as much as \$150 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Most of the work is done in an office that is well-lighted and generally pleasant.
2. Generally, the work week is 40 hours from Monday through Friday.
3. The draftsman spends most of his time at a desk or work table.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Most of the draftsmen in Utah work along the Wasatch Front, mainly in and around Salt Lake City and Ogden.

**TYPE OF INDUSTRY:**

Draftsmen are employed by engineering and architectural firms, manufacturing and research establishments, and by various local, state, and federal government agencies.

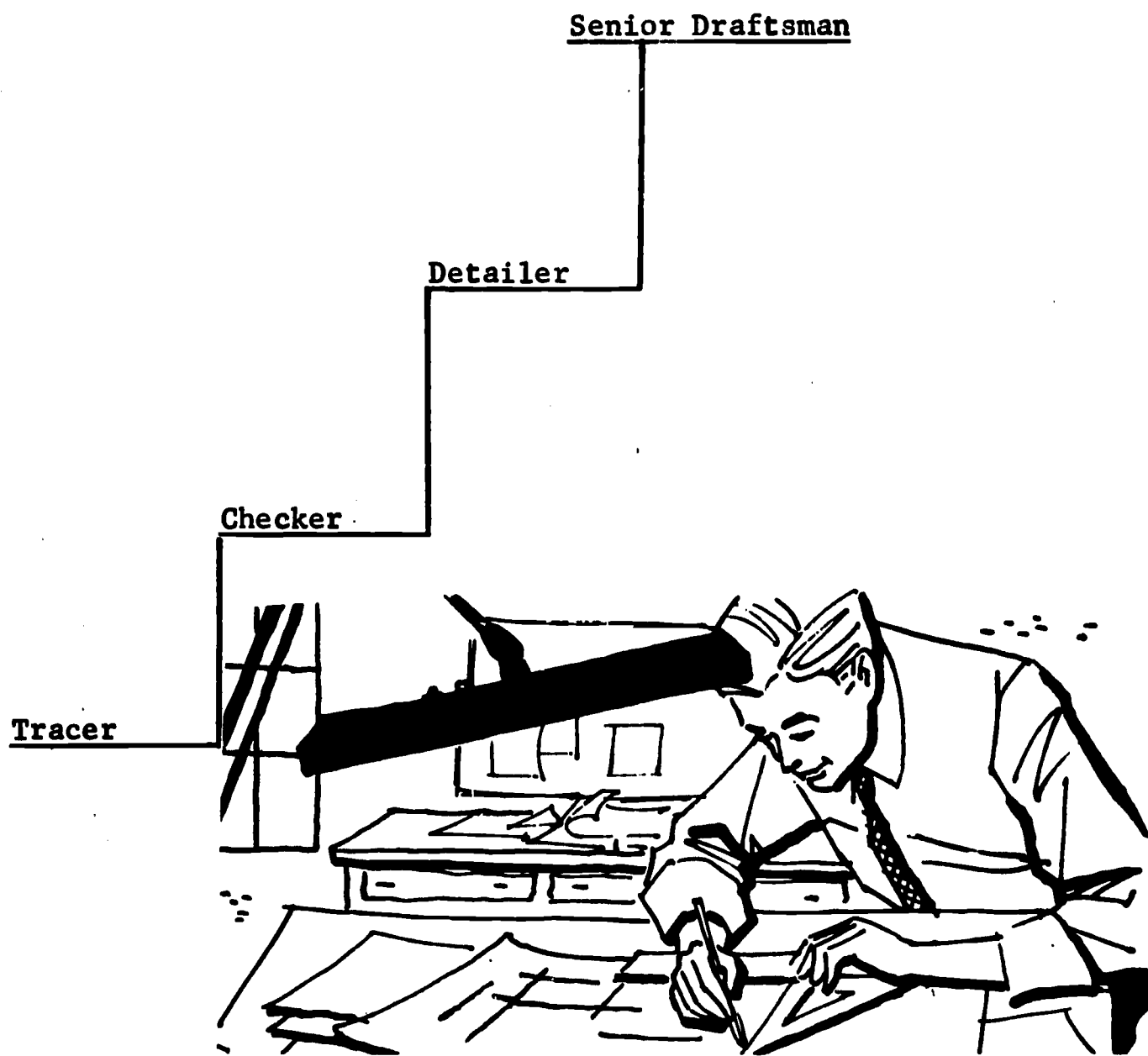
**Vocational Information For Education and Work**

Draftsman -- DOT Code 017.281 (July 1967)

IS THERE A NEED FOR DRAFTSMEN IN UTAH?

1. In 1965 there were 2062 draftsmen in Utah. It is predicted that by 1970 this number will increase to 2532.
2. The outlook for draftsmen is very good. The need will continue to rise in the future.

CAN YOU ADVANCE?



Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security



YOU ARE AN APPLIANCE REPAIRMAN

WHAT DO APPLIANCE REPAIRMEN DO?

THEY REPAIR ELECTRIC AND GAS APPLIANCES THAT DO NOT WORK PROPERLY BY:

1. Asking the customer what is wrong with the appliance
2. Turning on the appliance to check for unusual noises, overheating, vibration, and broken, loose, or worn parts
3. Looking for common sources of trouble such as faulty cords and connections
4. Using special equipment and testing methods to check for trouble in the electrical and gas systems
5. Finding the trouble area, then making the necessary repairs and adjustments
6. Taking the appliance apart, when necessary, to replace worn-out parts
7. Cleaning and lubricating appliances

THEY MAY ALSO:

1. Give customers advice and answer their questions on how to take care of their appliances
2. Tell customers about how much a repair job will cost
3. Do some selling of appliances

SOME APPLIANCE REPAIRMEN:

1. Work on only one specific brand of appliance
2. Repair only gas or only electrical appliances
3. Specialize in one type of appliance such as refrigerators, washing machines, dryers, toasters, irons, vacuum cleaners, sewing machines, lamps, etc.



WHAT SHOULD APPLIANCE REPAIRMEN BE LIKE?**THEY SHOULD BE:**

1. Honest
2. Dependable
3. Friendly
4. Courteous
5. Neat and clean

**THEY SHOULD HAVE:**

1. Mechanical ability
2. A knowledge of electricity
3. Good finger coordination
4. Normal vision and hearing
5. Normal use of arms and hands

**THEY SHOULD BE ABLE TO:**

1. Do a variety of electrical repair jobs
2. Get along well with customers
3. Use their eyes in close work
4. Do accurate detail work
5. Find trouble areas in gas and electrical appliances in a short amount of time
6. Drive a small truck

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are electricity, mathematics, physics, shop, and mechanical drawing.

**AFTER HIGH SCHOOL:**

1. Appliance repairmen are usually hired as helpers or trainees and learn their trade through on-the-job training and work experience. It generally takes three years to become a qualified repairman.
2. Utah Trade Tech. in Provo offers a one-year course in electrical appliance repair and Utah Trade Tech. in Salt Lake offers a one-year course in electricity. Employers prefer to hire graduates of these courses.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the starting salary for beginning appliance repairmen was from \$1.65 to \$2.00 an hour.
2. The fully qualified appliance repairman earned from \$2.00 to \$3.80 an hour depending upon where he worked, the type of appliances he repaired, his skill and length of time employed.
3. Some repairmen receive commissions on sales of appliances they make.

WHAT ARE WORKING CONDITIONS LIKE?

1. Appliance repair shops are generally quiet, well-lighted, and well-ventilated.
2. You will spend most of your time, while in the repair shop, working at a bench.
3. Depending upon where you work, you may spend much of your time making house calls to do repair work. This may involve working in dirty, uncomfortable, narrow spaces, or in a clean, comfortable area, depending upon the home.
4. If you are careless, there is danger of shocks or burns from handling electrical parts.
5. You will do your work with very little supervision.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

There is generally an appliance repairman in every community of 3,000 or more people. Most of them, however, are found in the large population centers of Salt Lake, Ogden, Provo, and Logan.

**TYPE OF INDUSTRY:**

Small repair shops, service centers connected with companies that make appliances or distribute them, gas and electric companies, and large appliance stores employ the majority of appliance repairmen. Many of them own their own shops.

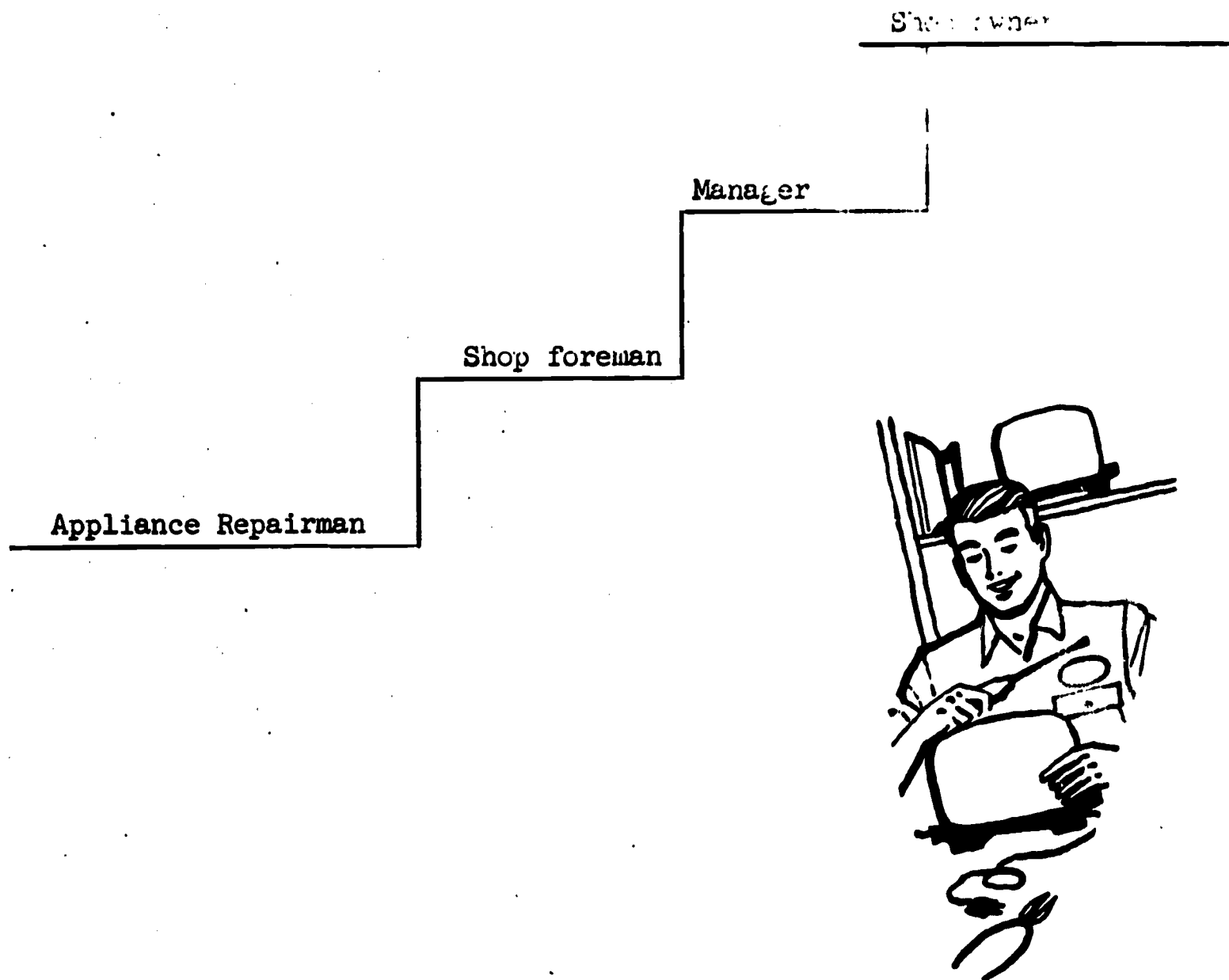
**Vocational Information For Education and Work**

Appliance Repairman - DOT Code 723-381  
(July 67)

IS THERE A NEED FOR APPLIANCE REPAIRMEN IN UTAH?

1. In 1965, there were approximately 450 appliance repairmen in Utah. It is predicted that by 1970 this number will increase to about 550.
2. The need for appliance repairmen will continue to rise due to the increase in the number of household appliances in use today.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



# YOU ARE AN ELECTRICIAN

## WHAT DO ELECTRICIANS DO?

THEY LAY OUT, ASSEMBLE, INSTALL, AND TEST ELECTRICAL FIXTURES, APPARATUS, AND WIRING.

### THEY:

1. Plan and lay out conduits or pipes that wires run through
2. Install many types of switches, conduits, controls, circuit breakers, wires, lights, and other electrical equipment
3. Install the proper wires in houses and buildings according to the amount of electricity the wires carry
4. Work from blueprints and plans to determine where the outlets and wiring are to go
5. Must know the electrical codes, or rules of the community where they are working

### THEY MAY ALSO:

1. Replace old or worn wiring or other electrical equipment in buildings being remodeled
2. Make electrical repairs on heating, lighting, air conditioning, refrigeration, and other electrical equipment
3. Work in industry and repair equipment such as motors, transformers, generators, controls, instruments, and lighting systems
4. Prevent breakdowns of industrial machines by inspecting the equipment or find and repair faulty equipment.

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WHAT SHOULD ELECTRICIANS BE LIKE?

## THEY SHOULD BE:

1. Skillful in the use of their hands
2. Patient
3. Fast
4. Ambitious

## THEY SHOULD HAVE:

1. Good hand and finger coordination
2. An interest in electricity
3. Good vision and hearing

## THEY SHOULD BE ABLE TO:

1. Work in awkward positions
2. Read blueprints
3. Stand for long periods of time
4. Take care of many details
5. Tolerate heat, dirt, dust, and noise

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will prepare you for this job are mathematics, physics, mechanical drawing, electricity, physical science, and shop courses.

## AFTER HIGH SCHOOL:

The best way to train for this job is as an apprentice. The apprenticeship program requires four years of on-the-job training, and classroom instruction.

HOW MUCH MONEY WILL YOU MAKE?

1. The union wage for electricians in Utah in 1966 was \$4.78 per hour.
2. The starting wage for apprentices was \$2.39 per hour. The salary is increased as the apprentice gains experience.

WHAT ARE WORKING CONDITIONS LIKE?

1. The electrician is active, but does not require great physical strength.
2. Electricians frequently stand for long periods of time or may have to work in cramped quarters.
3. Hazards include falls from ladders and scaffolds, cuts from sharp tools, and electrical shock.
4. As in the other construction trades the work may be seasonal. Jobs may be hard to find during the winter months.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Electricians work throughout the state. Opportunities are greatest in the larger cities such as Salt Lake and Ogden.

## TYPE OF INDUSTRY:

Construction projects involving building homes and commercial buildings use electricians extensively. Maintenance electricians are employed by machine shops and other industrial firms.

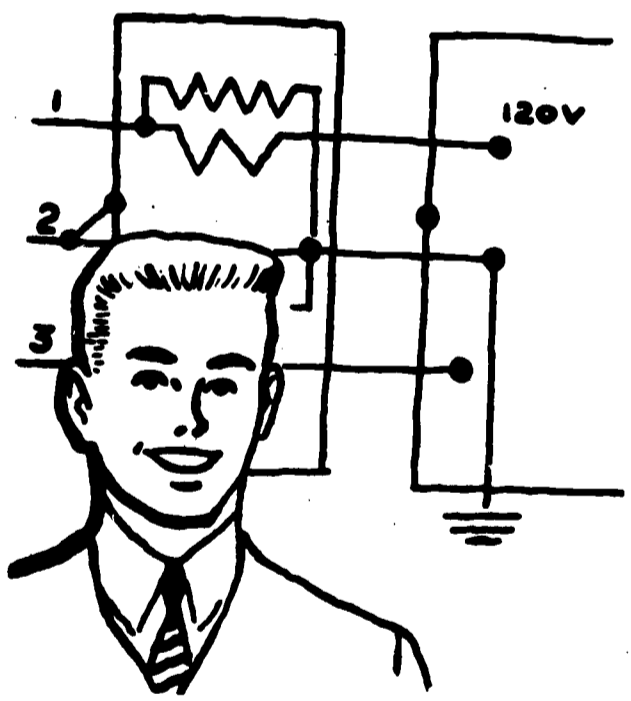
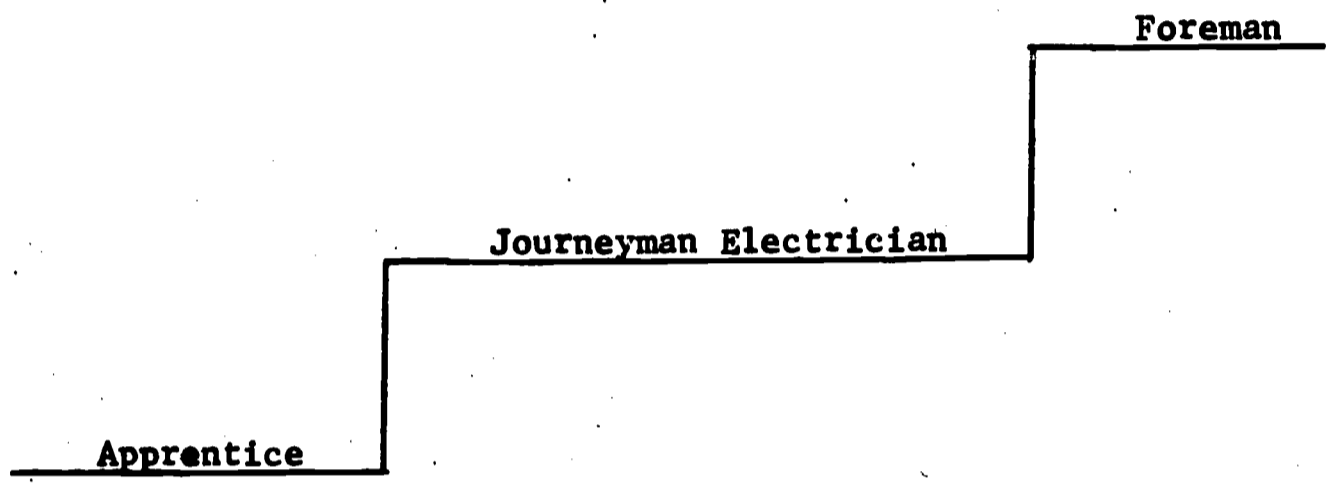
Vocational Information For Education and Work

Electrician - DOT Code 824.281  
(July 67)

IS THERE A NEED FOR ELECTRICIANS?

1. In 1965 there were 1,254 electricians in Utah. It is predicted that by 1970 this number will increase to 1,429.

CAN YOU ADVANCE?



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# YOU ARE AN ELECTRONICS ASSEMBLER

## WHAT DO ELECTRONICS ASSEMBLERS DO?

### THEY:

1. Perform various tasks in wiring, assembling, or installing parts such as tubes, capacitors, and transistors
2. Wind filaments or coils, solder joints of tiny parts, and do spot welding
3. Assemble tubes and other pre-made components or parts into larger assemblies
4. Usually work on a production line and assemble one part to help make the finished product
5. May follow blueprints, wiring diagrams, or other instructions.

### THEY MAY ALSO:

1. Use various machines to check the finished tube or transistor or other part to find and correct any defects
2. Work on components so small that there are as many as 100 separate parts or elements to be welded in a cubic inch of space
3. Use special hand tools to do precision assembly work
4. Work with a high degree of accuracy using magnifying lenses and microscopes.

### EQUIPMENT THEY USE INCLUDES:

Soldering irons, light welding devices, voltmeters, ammeters, oscilloscopes, wave meters, pliers, tweezers, drill presses, and other hand tools.



WHAT SHOULD ELECTRONICS ASSEMBLERS BE LIKE?

## THEY SHOULD BE:

1. Patient and persistent
2. Precise in their work
3. Skillful in the use of their hands
4. Fast

## THEY SHOULD HAVE

1. A concern for detail
2. Good hand and finger coordination
3. Good eyesight and color vision.

THEY SHOULD BE ABLE TO:

1. Take care of small details
2. Do neat and precise work
3. Concentrate on details for long periods of time
4. Work accurately under pressure.

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, physics, shop courses, and any courses dealing with electronics. A course in blueprint reading helps to get better jobs.

## AFTER HIGH SCHOOL:

Most employers require a high school diploma but no additional schooling. Hobbies such as radio and television repair may help to obtain a job. Additional post-secondary electronics schooling is necessary as you advance up the career ladder to electronics technician.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 electronics assemblers in Utah made an average of \$2.00 per hour.
2. The starting wage for electronics assemblers was from \$1.50 to \$1.75 per hour.
3. Some electronics assemblers made as much as \$2.75 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Electronics assemblers generally sit while working.
2. The job usually involves reaching and bending, but not much other physical exertion.
3. Most working areas are modern and well lighted.
4. Injuries do not occur very often. The most common injuries are from burns or cuts.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHIC LOCATION:

Most electronics assemblers work in or near the larger cities where the centers of industry and manufacturing are located. Opportunities in the less populated areas of the state are limited.

## TYPE OF INDUSTRY:

Firms engaged in the design and manufacture of electronics parts such as Sperry, Litton and Sygnetics hire most of the electronics assemblers.

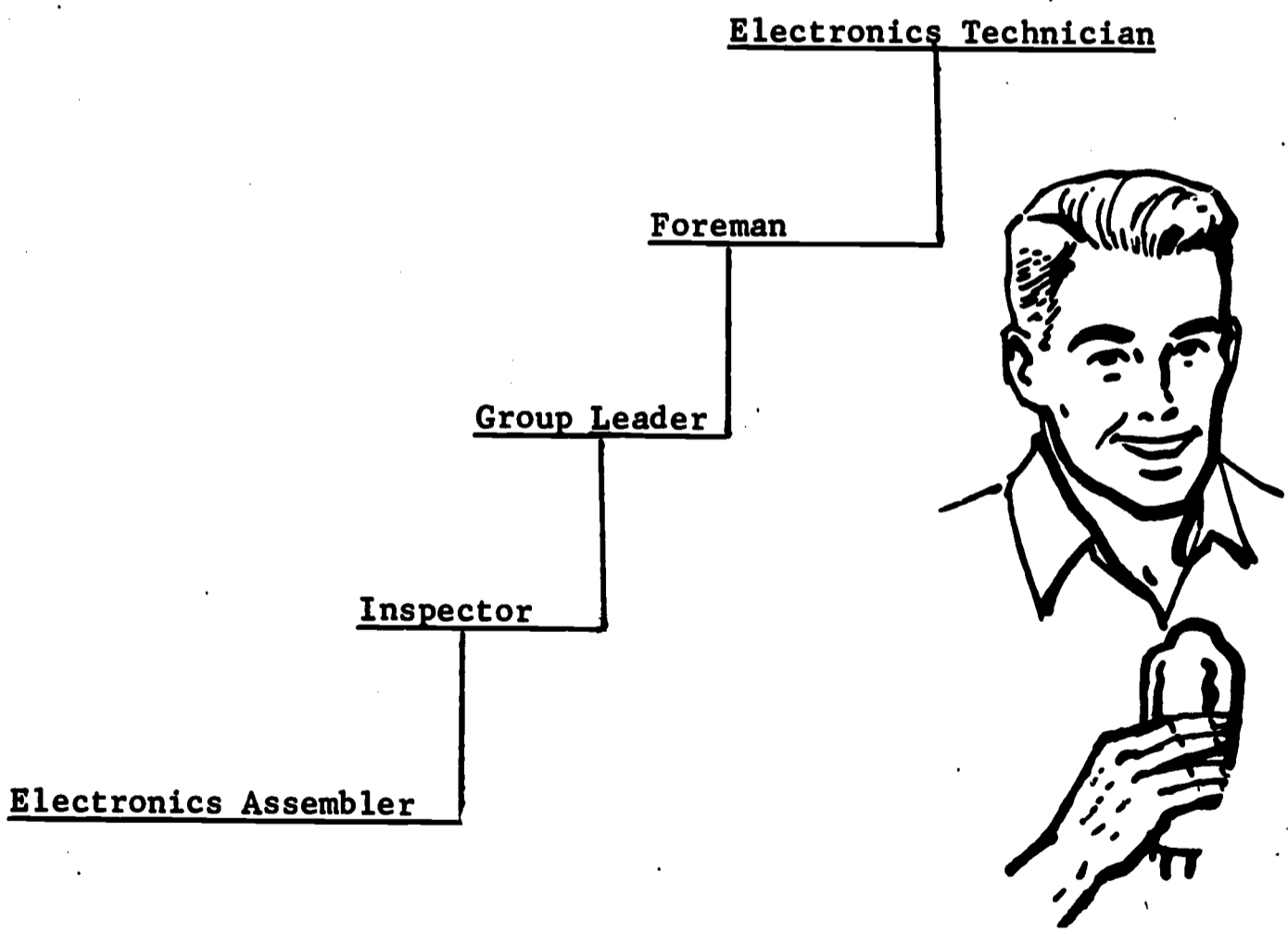
Vocational Information For Education and Work

Electronics Assemblers - DOT CODE 726.781  
(July 1967)

IS THERE A NEED FOR ELECTRONICS ASSEMBLERS?

- 1. In 1965 there were 663 electronics assemblers in Utah. It is predicted that by 1970 this number will increase to 997.
- 2. As science advances the need for special electronics parts will rapidly increase and the outlook for electronics assemblers seems very good.

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**YOU ARE AN ELECTRONICS TECHNICIAN****WHAT DO ELECTRONICS TECHNICIANS DO?**

**ELECTRONICS TECHNICIANS WORK CLOSELY WITH ENGINEERS, USING ELECTRONIC THEORY AND PRINCIPLES TO BUILD, TEST, REPAIR, AND INSTALL ELECTRONIC EQUIPMENT.**

**THEY:**

1. Use layouts and blueprints to determine where the wiring goes in complicated electronic equipment.
2. Assist engineers in the design and development of new electronic parts, systems, and equipment.
3. Modify and change electronic testing equipment for special purposes.
4. Test faulty electronic equipment to find what is wrong and repair it.
5. Keep records and write technical reports.

**THEY MAY ALSO:**

1. Build experimental models of complex electronic equipment.
2. Use equipment such as oscilloscopes, signal generators, ohm-meters, ammeters, voltmeters, and other equipment.
3. Work in one or more electronics fields such as audio, recording, telemetry, computing, magnetic amplification, radar, sonar, signal generation, and others.
4. Refer to engineering handbooks scientific research reports, and other sources, to get information to complete a job.

WHAT SHOULD ELECTRONICS TECHNICIANS BE LIKE?

## THEY SHOULD BE:

1. Patient and persistent
2. Precise
3. Skillful in the use of their hands
4. Above average in intelligence

## THEY SHOULD HAVE:

1. Good eye-hand coordination
2. Good vision
3. Good finger coordination
4. A concern for detail

## THEY SHOULD BE ABLE TO:

1. Use their eyes in close work for long periods
2. Sit for long periods
3. Take care of many details
4. Work under pressure

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are algebra, geometry, trigonometry, physics, electronics courses, English, drafting, and shop.

## AFTER HIGH SCHOOL:

1. A high school diploma is required.
2. Two years of technical training is usually required. This training may be received at the Trade Schools in Salt Lake City and Provo.
3. All of the larger colleges in Utah offer a program in electronics, and most of the junior colleges offer a two-year program. The smaller colleges which do not offer a program at the present, may develop programs in the near future to meet the demands of this growing field.
4. Most branches of the military offer electronics technicians' courses to those who have the aptitudes for this job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average electronics technician in Utah made \$125 per week.
2. Their starting salary was from \$80 to \$100 per week
3. Some electronics technicians made as much as \$200 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. The work is usually done indoors in well-lighted and adequately ventilated plants.
2. Job hazards are not great, although shocks may occur from high voltages if proper precautions are not taken.
3. Lifting, turning, and reaching may frequently be required.
4. The electronics technician's job is particularly enjoyable to people who like research and development of new products.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

The majority of Utah's electronics technicians are employed in the Wasatch Front area in Davis, Salt Lake, Utah, and Weber counties.

**TYPE OF INDUSTRY:**

Electronics technicians work in research and production departments of manufacturing plants, in television and radio, for military bases, and other governmental agencies.

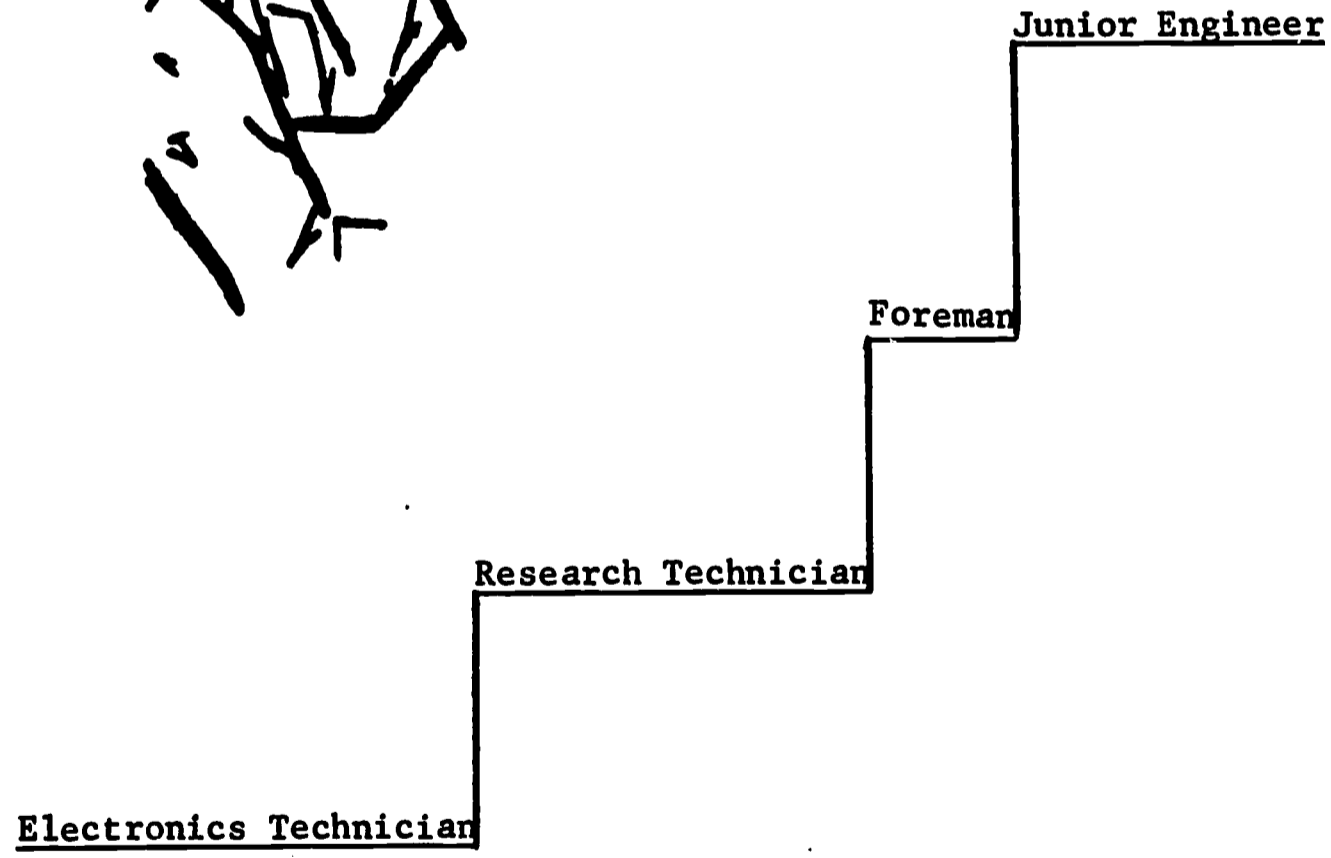
**Vocational Information For Education and Work**

Electronics Technician -- DOT Code 003.181 (July 67)

IS THERE A NEED FOR ELECTRONICS TECHNICIANS?

- 1. In 1965 there were 1170 electronics technicians in Utah. It is predicted that by 1970 this number will increase to 1270.
- 2. Electronic technicians are among the fastest growing occupational groups in the United States.

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WHAT DO FARMERS DO?

THEY RAISE VARIOUS KINDS OF LIVESTOCK AND CROPS.

THE CROP FARMER:

1. Decides what kind of crop to grow and in what amount, depending upon the condition of the soil and the general climate
2. Prepares the soil for planting by plowing, harrowing, and fertilizing
3. Buys the necessary quantity of seed and plants it
4. Irrigates, cultivates and sprays his crop
5. Harvests the crop and arranges to sell it
6. Buys and operates different kinds of farm machinery

THE LIVESTOCK FARMER:

1. Decides what kind of livestock to raise, such as cattle, sheep, pigs, or horses, according to which type is best suited for his area of the country
2. Buys feed, mixes it, and places it in the animals trough
3. Drives livestock to pastures for grazing or to the open range where they must be herded. Shepherders may spend 5-7 months on the open range
4. Examines animals for diseases and, if necessary, vaccinates them
5. Brands the animals, shears sheep
6. Cleans out their stalls
7. Repairs fences
8. Helps in the delivery of new born livestock
9. Arranges to sell his stock

THE DAIRY FARMER:

1. Raises dairy cows to produce milk and milk products
2. Breeds cows
3. Milks cows by hand or machine
4. Stores the milk until it is picked up by tank trucks



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**THE POULTRY FARMER:**

1. Raises poultry to produce eggs or to sell
2. Places eggs in incubators and watches over them
3. Removes baby chicks from the incubator and places them in heated coups
4. Collects eggs and packs them for shipping
5. May care for a flock of turkeys on a range

**THE FRUIT FARMER:**

1. Plants and cultivates fruit trees
2. Prunes and sprays the trees
3. Protects them from frost during cold weather
4. Picks the fruit when it's ripe

FRUIT, POULTRY, AND DAIRY FARMERS MUST ALSO DO MANY OF THE BASIC TASKS LISTED UNDER CROP FARMER AND LIVESTOCK FARMER.

FARMERS MAY EITHER SPECIALIZE OR DO ANY COMBINATION OF THE ABOVE MENTIONED ACTIVITIES, SUCH AS RAISING CROPS, LIVESTOCK, POULTRY, AND FRUIT, AT THE SAME TIME.

**LARGE FARM OWNERS:**

1. Hire farmhands to do most of the above mentioned jobs
2. Spend most of their time supervising these jobs and planning what type of crop or livestock or combination of both they will raise in the future
3. Buy seed, new stock, feed, chemicals, and machinery
4. Operate large farm machinery
5. Keep livestock and crop records
6. Arrange for shipping and selling of their product and keep financial records
7. Must be acquainted with all kinds of crops and livestock and diseases they might have
8. See that everything on the farm runs smoothly

WHAT SHOULD FARMERS BE LIKE?

## THEY SHOULD BE:

1. Physically strong
2. Willing to do hard work
3. Dependable
4. Outstanding in their field

## THEY SHOULD HAVE:

1. Good health
2. Stamina
3. A liking for the out-of-doors
4. An interest in animals and nature

## THEY SHOULD BE ABLE TO:

1. Do heavy lifting, stooping, and bending
2. Repair farm machinery
3. Drive a tractor and perhaps a wagon and team of horses
4. In some cases, saddle and ride a horse
5. Work long hours, often from dawn till dusk
6. Follow instructions

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are biology, auto mechanics, and shop. Membership in a 4-H club or in the Future Farmers of America would also be helpful.

## AFTER HIGH SCHOOL:

1. Experience is the best training for a farmer. Employers who hire farmhands prefer someone who has "grown up" on a farm or had previous experience working on a farm. Any additional training will be received on the job.
2. Farm managers or large farm owners often are graduates from an agricultural college. Your chances of succeeding in "big business" farming are much better if you receive college training.

Vocational Information For Education and Work

Farmer - DOT Code 421.181  
(July 67)

HOW MUCH MONEY WILL YOU MAKE?

1. Regular year around farmhands receive between \$200 - \$350 a month plus, in most cases, food and lodging.
2. Seasonal workers receive from \$1.25 - \$1.75 an hour.
3. In 1960, the average yearly income for Utah farmers was \$4,434. The farmer's income depends upon the size of his farm, its location, the product he raises and its yearly success.

WHAT ARE WORKING CONDITIONS LIKE?

1. You are generally free from close supervision.
2. You will spend most of your time working outdoors.
3. You must work long hours and often in all types of weather.
4. Heavy lifting, stooping, bending, and reaching are all part of a day's work.
5. There is a possibility of injury from heavy work and farm equipment.

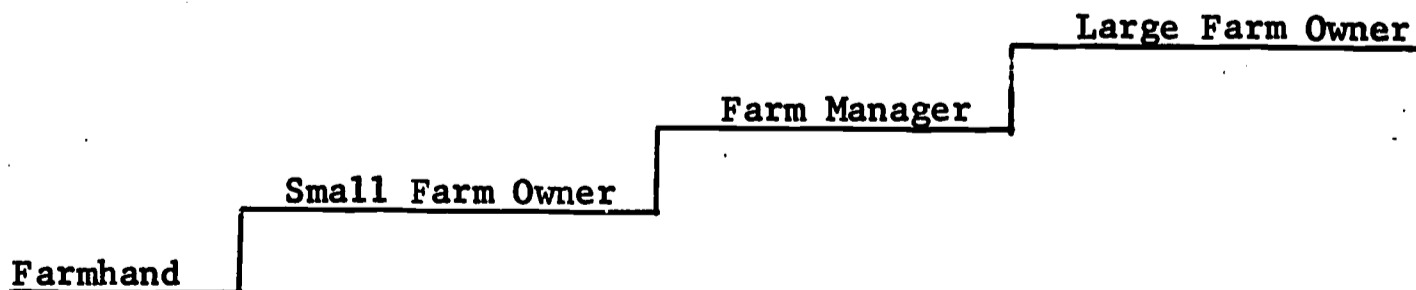
WHERE IN UTAH WILL YOU WORK?

1. Most farmers work some distance from the large population and industrial areas. Most of Utah's farms are located in the Cache, Sevier, Gunnison, and other mountain valleys, the Price, St. George, and Uintah Basin areas, and the eastern shoreline of Utah Lake and Great Salt Lake.

IS THERE A NEED FOR FARMERS IN UTAH?

1. In 1965, there were 11,300 farmers in Utah. It is predicted that by 1970, this number will decrease to 8,800.
2. The decrease in the number of farmers will be due to a decrease in the number of small farm owners. Small farms cannot continue to operate successfully in competition with large farms equipped with modern farm machinery. Because of new methods and equipment in farming, it takes less farmers to produce the country's food supply.

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## YOU ARE A FILE CLERK

WHAT DO FILE CLERKS DO?

THEY KEEP OFFICE RECORDS ACCORDING TO A DEFINITE PLAN SO THEY CAN BE EASILY FOUND WHEN NEEDED.

## THEY:

1. Sort different kinds of material such as letters, newspaper clippings, legal documents, sales reports, stock records, customer information, manuals, insurance policies, etc.
2. Arrange the material either alphabetically, numerically, by date, or according to what it's about
3. Type labels and headings on folders in which they file the sorted material
4. Prepare cross reference cards to help them find the material more quickly and easily
5. Search the files for information or papers that people have requested and keep a record of any material removed from its file

## THEY MAY ALSO:

1. Decide what material is no longer needed and can be thrown away
2. Read letters and reports to determine where they should be filed or if the information can be useful
3. Do some typing and operate office machines that record information on cards
4. Photograph records on microfilm

WHAT SHOULD FILE CLERKS BE LIKE?

## THEY SHOULD BE:

1. Neat
2. Accurate
3. Cooperative
4. Personable

## THEY SHOULD HAVE:

1. A good memory
2. Good finger coordination
3. Legible handwriting
4. Full use of hands and legs

## THEY SHOULD BE ABLE TO:

1. Do some typing
2. Use good grammar and spell correctly
3. Work well with numbers
4. Get along well with people
5. Do routine, detailed work
6. Combine speed and accuracy while filing

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are English, typing, filing, record keeping, arithmetic and business machine operation.

## AFTER HIGH SCHOOL:

1. Most employers require a high school diploma but no additional schooling. You will receive your training on the job. You may be given a test to measure your reading comprehension, numerical ability, and spelling ability.
2. Additional schooling at a business school or vocational school in subjects such as shorthand, typing, bookkeeping, and business machine operation, will help you get promotions.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average salary for file clerks was \$1.70 an hour.
2. Their starting salary was \$1.35 an hour.
3. Some made as high as \$2.25 an hour, depending upon their experience and length of time employed.

WHAT ARE WORKING CONDITIONS LIKE?

1. Most file clerks are on their feet, moving about, for a good part of the day.
2. They must stretch, bend, and reach to get at certain files.
3. The work is very repetitive at times and may become boring.
4. The work area is generally well-lighted and well-ventilated.
5. The work must be done at a steady rate, but usually without pressure to hurry.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The majority of Utah's file clerks work in Box Elder, Davis, Weber, Salt Lake, and Utah counties, where the greatest percentage of large businesses are located.

## TYPE OF INDUSTRY:

Banks, insurance firms, real estate offices, federal and local government offices, large manufacturing companies, wholesale houses and department stores employ the majority of file clerks.

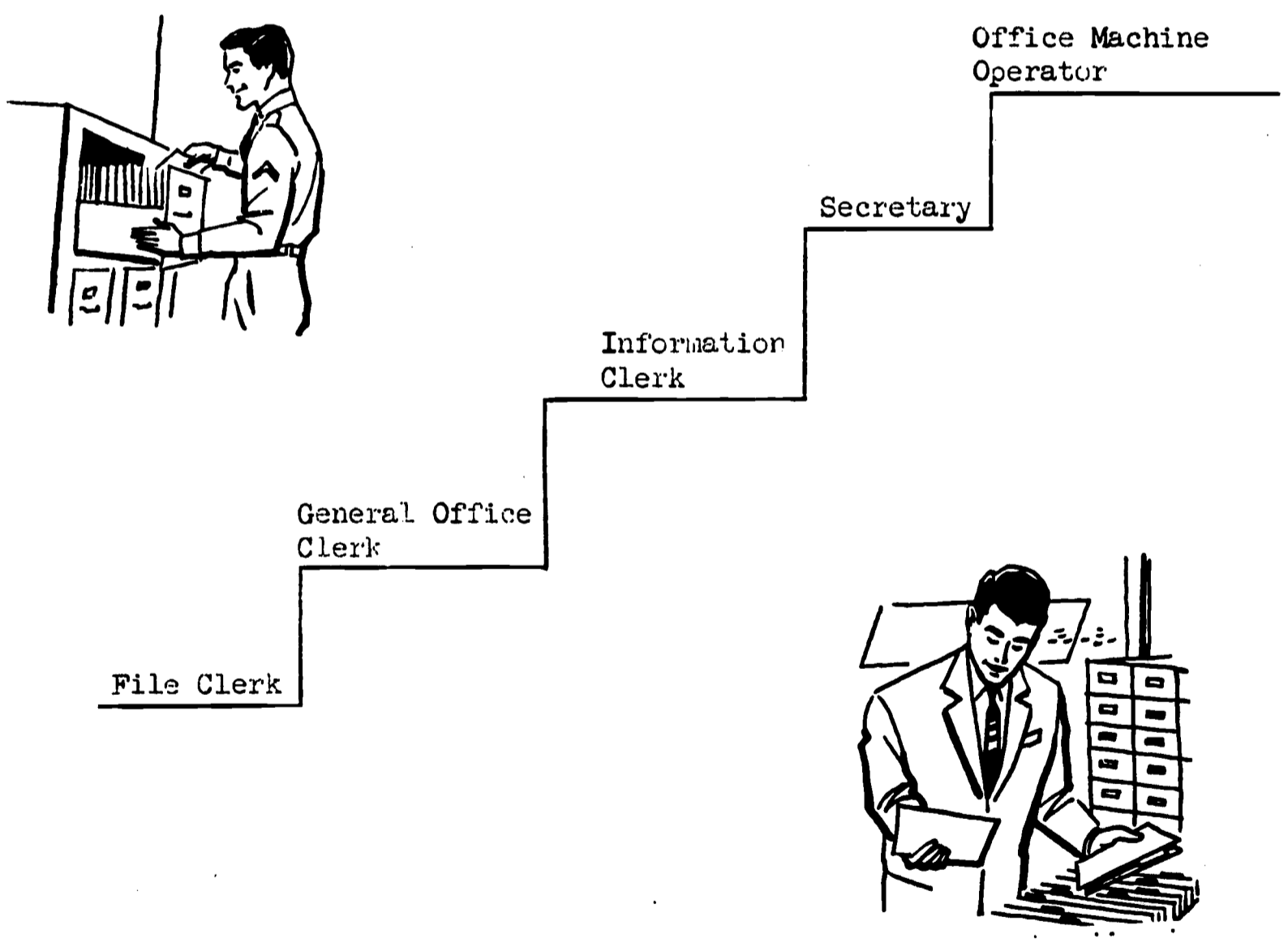
**Vocational Information For Education and Work**

File Clerk - DOT Code 206.388  
(July 67)

IS THERE A NEED FOR FILE CLERKS IN UTAH?

- 1. In 1965, there were 1,146 file clerks in Utah. It is predicted that by 1970, this number will increase to 1,343.
- 2. The need for file clerks will continue to rise due to an expected increase in business activity.
- 3. There is usually a high demand for file clerks due to large turnover as many young women marry or leave their jobs to stay at home and raise a family.
- 4. This job is almost completely dominated by women.

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**YOU ARE A FIREMAN****WHAT DO FIREMEN DO?**

**FIREMEN GUARD AND PROTECT THEIR COMMUNITIES FROM THE DANGERS OF UNCONTROLLED FIRES.**

**THEY:**

1. Must be prepared, at a moment's notice, to go to a fire or handle other emergencies
2. Help maintain over 3,000 items of tools and equipment
3. Administer first aid and artificial respiration
4. Must know how to handle various types of fires such as building fires, automobile fires, grass fires, and others
5. Participate in drills and clean equipment

**THEY FIGHT FIRES BY:**

1. Selecting the correct hose nozzle to use
2. Connecting the hose to the fire hydrant, pumper, or other water source.
3. Directing a stream of water, foam, or chemical on the fire
4. Using axes, chisels, and crowbars to beat a path into burning buildings

**THEY ALSO:**

1. Cover furniture, shelves, and counters to protect them from smoke and water
2. Help clean up the dirt and debris after the fire



WHAT SHOULD FIREMEN BE LIKE?

**THEY SHOULD BE:**

1. Alert
2. Courageous
3. Calm
4. Responsible
5. In good physical shape

**THEY SHOULD HAVE:**

1. A desire to serve others
2. Above average physical strength
3. Full use of both hands and legs
4. Normal vision and hearing

**THEY SHOULD BE ABLE TO:**

1. Take and give orders
2. Work well with others
3. Make quick decisions
4. Tolerate smoke and fire
5. Work at heights

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that may be helpful in obtaining this job are health, first aid, chemistry, shop courses, and some mathematics.

**AFTER HIGH SCHOOL:**

1. A high school diploma is not required, but will be helpful in obtaining a job.
2. Applicants are usually selected on the basis of a written test involving general knowledge, safety procedures, first aid techniques, and may cover other subjects.
3. Applicants may also be required to pass a test involving physical skills.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for firemen in Utah was \$375 to \$425 per month.
2. The starting wage for firemen was \$300 to \$350 per month.
3. Some firemen made as much as \$600.

WHAT ARE WORKING CONDITIONS LIKE?

1. Only 25% of the fireman's time is spent in fighting fires or on emergency calls. The rest of the time is spent at the station.
2. Most firehouses are modern one-story buildings.
3. Working hours may vary greatly, and firemen sometimes spend several days on duty without a break, and then may be off duty for several days.
4. Firemen are exposed to many hazards, and the on-the-job injury rate is higher than in most other occupations.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Firemen work throughout the state, but most opportunities are found in the larger cities and more populated counties.

**TYPE OF INDUSTRY:**

Nearly all firemen work for city and county fire departments, with a small part working in larger industries or for government agencies.

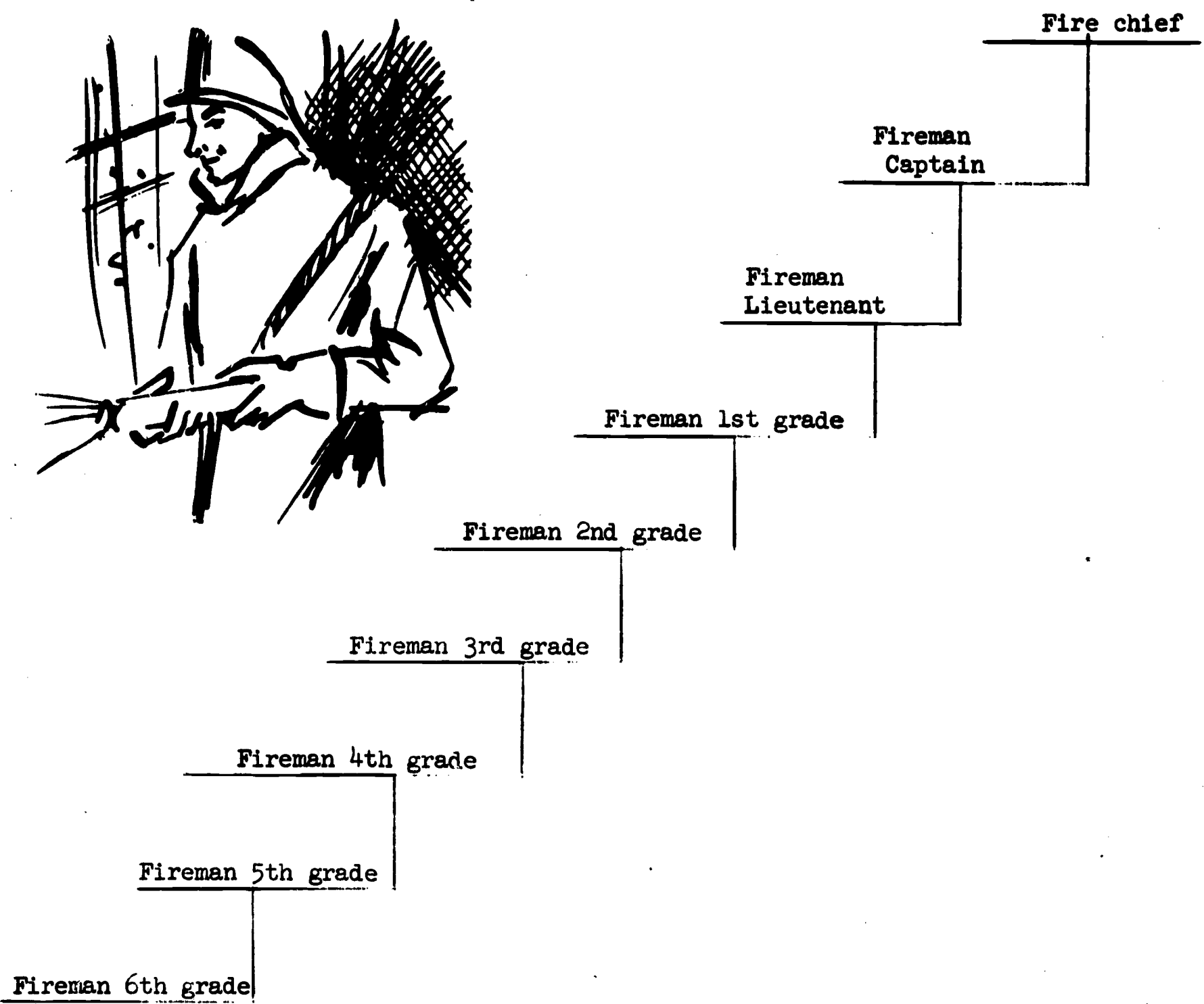
**Vocational Information For Education and Work**

Fireman - Dot Code 373.884  
(July 67)

IS THERE A NEED FOR FIREMEN?

In 1965 there were 705 firemen in Utah. It is predicted that by 1970 this number will increase to 800.

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**YOU ARE A FLOOR COVERER****WHAT DO FLOOR COVERERS DO?**

**THEY INSTALL TILE, LINOLEUM AND CARPETING IN HOMES AND BUILDINGS BY:**

1. Preparing the floor for the new covering by removing the old covering, filling in holes, sanding rough spots, and sweeping
2. Measuring the room, then tracing the measurements onto felt paper
3. Placing the felt paper on the material (tile, linoleum, or carpet) and cutting it to fit the room
4. Gluing or tacking a pad undercovering on the floor
5. Gluing the linoleum or tile in sections on the pad, making sure the edges and design match
6. Laying the carpet on the padding, stretching it into place so that it fits tight, and hooking it on nails which have been nailed around the border
7. Rolling the linoleum or tile smooth with a roller
8. Installing metal strips to protect doorways and edges

**THEY MAY ALSO:**

1. Repair tile, linoleum and carpeting
2. Replace worn-out sections of carpeting, tile or linoleum

WHAT SHOULD FLOOR COVERERS BE LIKE?

## THEY SHOULD BE:

1. Agile
2. Dependable
3. Neat
4. Courteous
5. Tactful

## THEY SHOULD HAVE:

1. Average strength
2. Good color perception
3. No back injuries
4. A business-like manner
5. Good finger coordination

## THEY SHOULD BE ABLE TO:

1. Work alone without close supervision
2. Use basic arithmetic to solve problems
3. Get along well with others, especially customers
4. Stoop, kneel, bend and reach
5. Do some strenuous work
6. Plan out a work schedule

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mechanical drawing, shop, woodworking, mathematics, and drafting.

## AFTER HIGH SCHOOL:

1. The best way to become a fully qualified floor coverer is to train for three years as an apprentice. During this time you will receive supervised on-the-job training and related classroom instruction.
2. Some workers learn the trade informally as helpers. They advance much slower than the apprentice.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average pay for floor coverers was \$3.50 an hour.
2. Some highly skilled and experienced floor coverers earned as much as \$4.50 an hour.
3. The starting salary for apprentices was \$1.75 an hour. They receive a raise every six months of their three-year apprenticeship.

WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions vary from the clean comfort of a home to the dirt and noise of a construction site.
2. They vary from a one-day job in a home to a job in an office building that might take three months.
3. There is often pressure to work fast, but carefully.
4. You will spend much of your day on your hands and knees.
5. The customer is often right there, looking over your shoulder to check on the job.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

The majority of Utah's floor coverers are employed in the Wasatch Front area which includes Box Elder, Weber, Davis, Salt Lake, and Utah counties. A few workers find steady work in smaller towns.

**TYPE OF INDUSTRY:**

Construction companies, specialty contractors, furniture stores, and carpet, linoleum, and tile stores employ the majority of floor coverers.

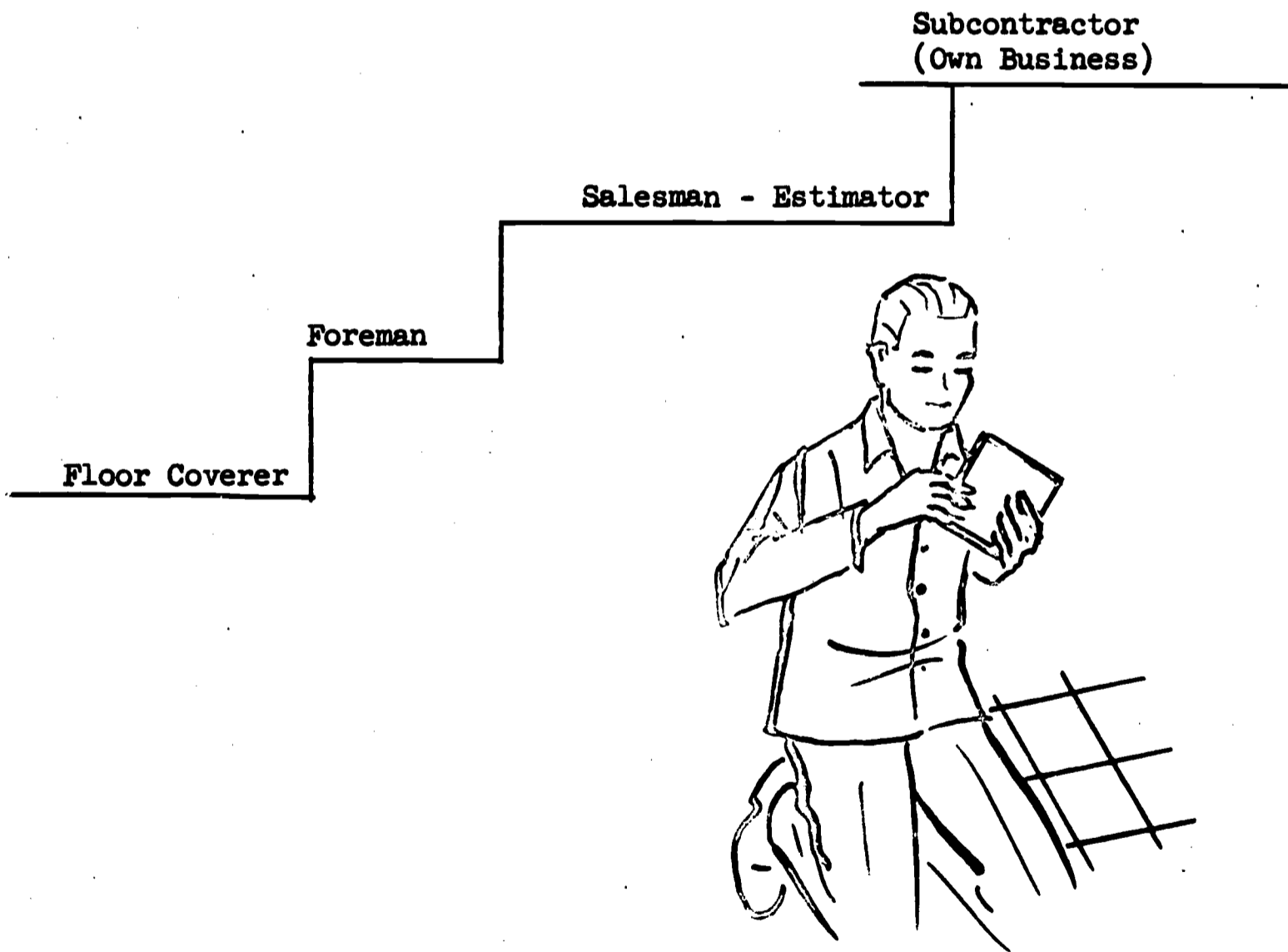
**Vocational Information For Education and Work**

Floor Coverer - DOT CODE 864.781  
(July 67)

IS THERE A NEED FOR FLOOR COVERERS IN UTAH?

- 1. In 1965 there were 325 floor coverers in Utah. It is predicted that by 1970 this number will increase to 425.
- 2. The need for floor coverers will rise as the construction industry grows. A growth in the construction industry is predicted for Utah in the next three years.

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## YOU ARE A FORESTRY AID

WHAT DO FORESTRY AIDS DO?

## THEY:

1. Assist foresters in managing and caring for both public and private forest lands
2. Conduct road surveys and maintain forest trails
3. Collect information on the condition of watershed projects
4. Issue fire permits, enforce regulations in recreational areas, and give campers advice and information
5. Mark trees that are to be cut by blazing them with an ax or with paint

## THEY MAY ALSO:

1. Work in fire prevention and control by leading fire fighting crews, working as lookouts, and planting new trees and shrubs in burned areas
2. Work through forested areas to determine how much timber can be cut or to inspect trees for diseases and insects
3. Help to stop tree diseases by using sprays and chemicals
4. Work with a tree planting crew to plant evergreens in certain areas of the forest
5. Supervise timber sale operations
6. Be responsible for training, directing, and supervising forest laborers
7. Prepare maps and graphs and write progress reports



WHAT SHOULD FORESTRY AIDS BE LIKE?

## THEY SHOULD BE:

1. Physically fit
2. Energetic
3. Dependable
4. Good tempered

## THEY SHOULD HAVE:

1. An interest in the outdoors
2. Full use of both hands and legs
3. Normal vision and hearing
4. Good eye-hand coordination

## THEY SHOULD BE ABLE TO:

1. Work hard for long periods of time
2. Carry out tasks without direct supervision
3. Walk long distances
4. Get along well with other people

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are biology, physical science, agriculture, chemistry, and some mathematics.

## AFTER HIGH SCHOOL:

High school graduation is required and some experience in any phase of forestry such as fire fighting, recreation work, or labor is helpful. Sometimes a job may be obtained without experience and training is given on the job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 forestry aids in Utah averaged \$100 per week.
2. Their starting salary was from \$70 to \$90 per week.
3. Some forestry aids made as much as \$140 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Forestry aids spend most of their time outdoors, working in all weather conditions.
2. In emergencies such as forest fires, forestry aids work many extra hours without rest.
3. The work may be seasonal; most forestry aids work during the summer, and many of them are college students who are planning to become foresters.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Forestry aids work throughout the state in all major forested areas. Forested areas cover one-third of the state, the Wasatch mountain range taking up most of this territory.

**TYPE OF INDUSTRY:**

Nearly all forestry aids work for the federal or state government, with the federal government employing the majority. Very few forestry aids work in private industry.

**Vocational Information For Education and Work**

Forestry Aid - DOT Code 441.384  
(July 67)

IS THERE A NEED FOR FORESTRY AIDS?

In 1969 there were 150 forestry aids in Utah. It is predicted that by 1970 this number will increase to 175.

CAN YOU ADVANCE?

There are few opportunities for advancement without further education. To become a forester a bachelor's degree from a four-year college is required.

Forester  
(Requires college degree)

Forestry aid



**Prepared Cooperatively By:  
Utah State Board of Education  
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## YOU ARE A FOUNDRYMAN

WHAT DO FOUNDRYMEN DO?

THEY PREPARE METAL CASTINGS OR MOLDS INTO WHICH THEY POUR MELTED METAL WHERE IT COOLS AND HARDENS INTO THE DESIRED FORM.

THERE ARE SEVERAL STEPS INVOLVED IN MAKING A MOLD:

1. The patternmaker makes a wood or metal pattern in the shape of the mold desired.
2. The sand mixer prepares sand using dry sand, silica sand, and clay.
3. The sand molder makes a sand mold by packing and ramming sand.
4. A machine molder operates machines that make molds and pour metals.
5. Coremakers prepare bodies of sand, called cores, that are placed in the mold. After the metal hardens around the core, it is removed, leaving the desired shape.
6. A melter operates a furnace that melts the metal which is poured into the mold.
7. Chippers and grinders use machines to take the rough edges off the finished object after it has been taken out of the mold.
8. Casting inspectors check the finished product for errors.

MOST FOUNDRYMEN WORK AS MOLDERS BUT MAY PERFORM SEVERAL OF THE ABOVE JOBS.

FOUNDRYMEN MAKE MOLDS FOR MACHINE BASES, SHOP PROPELLERS, BEARINGS, WATER FAUCETS, WATER MAINS, ENGINE BLOCKS, GEARS, AIRCRAFT AND MISSILE PARTS, AND VARIOUS OTHER ITEMS.

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WHAT SHOULD FOUNDRYMEN BE LIKE?

**THEY SHOULD BE:**

1. In good health
2. Capable of using both hands and legs normally
3. Willing to do hard physical work
4. Dependable

**THEY SHOULD HAVE:**

1. Good vision and hearing
2. Average strength
3. Good eye-hand coordination
4. Above average stamina

**THEY SHOULD BE ABLE TO:**

1. Lift heavy objects
2. Do some strenuous work
3. Tolerate dirt, dust, and heat
4. Work well with others

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

1. Subjects that will help prepare you for this job are metal shop, shop courses, English, and mathematics.
2. Graduation from high school is not essential, but will help you obtain a better job.

**AFTER HIGH SCHOOL:**

Most foundrymen in Utah are trained on the job, starting as unskilled workers or helpers. The helper gradually receives experience and may then advance to a more skilled position.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average salary for foundrymen in Utah was \$2.75 per hour.
2. The starting salary for a foundryman as a helper was \$2.00 per hour.
3. Some foundrymen made as much as \$3.75 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. The work may be hard, and physical discomfort is often experienced.
2. In newer factories working conditions have been improved but in older plants safety and comfort are below average.
3. There are possibilities of back injuries from lifting heavy objects.
4. Dust and fumes may cause lung disease.
5. Molten metal can cause severe burns if not handled properly.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most foundrymen work in the larger cities along the Wasatch Front area of Salt Lake, Ogden and Provo.

## TYPE OF INDUSTRY:

Most foundries in Utah are smaller factories which produce molds or castings for private industry.

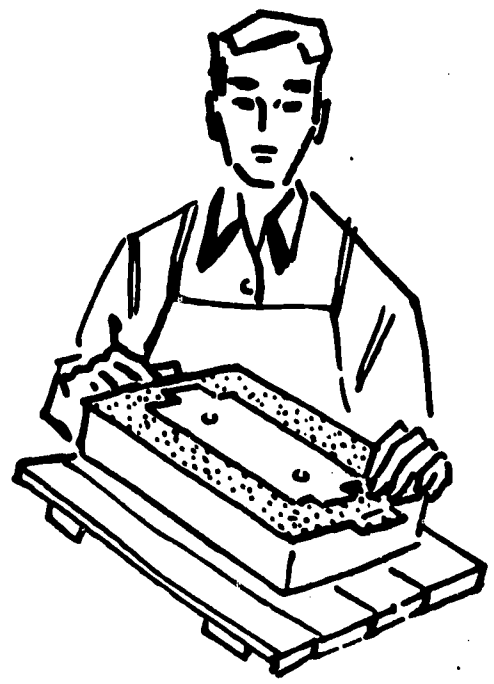
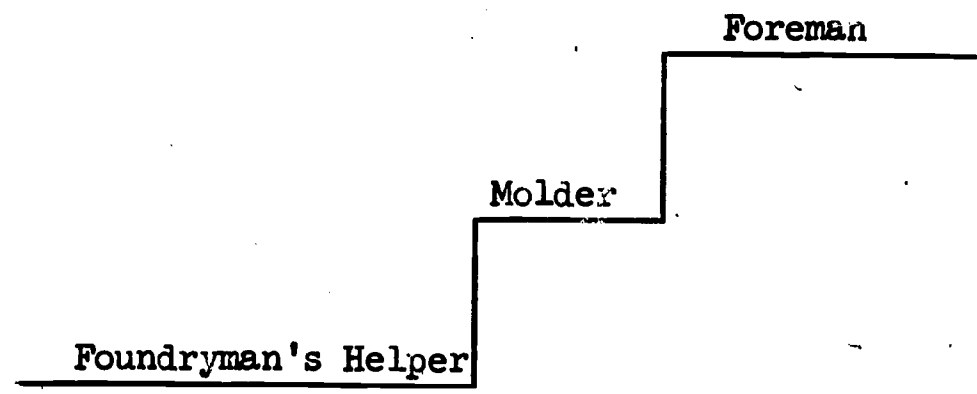
**Vocational Information For Education and Work**

Foundryman - DOT Code 518.381  
(July 67)

IS THERE A NEED FOR FOUNDRYMEN?

- 1. In 1965 there were 110 foundrymen in Utah. It is predicted that by 1970 this number will increase to 120.
- 2. Opportunities are not great in this field, but normal turnover will leave a number of vacancies in the future.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
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YOU ARE A FURNACE INSTALLER  
AND REPAIRMAN

WHAT DO FURNACE INSTALLERS AND REPAIRMEN DO?

THEY INSTALL FURNACES IN HOMES, LARGE BUILDINGS, STORES, RESTAURANTS, FACTORIES AND OTHER ESTABLISHMENTS BY:

1. Working from blueprints to install furnaces and heating systems in large buildings and factories
2. Putting the motors, blowers, and other parts in their correct place as designed
3. Measuring and cutting pipe
4. Connecting all pipes and air ducts that are part of the system to the furnace
5. Putting the proper fuel into the system, then checking it to see that it operates correctly
6. Adjusting the safety controls, those that measure out the fuel, and any others to make the equipment as efficient as possible
7. Installing furnaces in homes and smaller buildings while following diagrams they must prepare beforehand on where and how to make the installation

THEY REPAIR FURNACES AND HEATING EQUIPMENT BY:

1. Cleaning and lubricating the equipment, examining it for any defects, and adjusting the control valves
2. Finding the trouble area when equipment breaks down and repairing or replacing the defective parts

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WHAT SHOULD FURNACE INSTALLERS AND REPAIRMEN BE LIKE?

**THEY SHOULD BE:**

1. In good physical condition
2. Persistent
3. Accurate

**THEY SHOULD HAVE:**

1. Normal vision and hearing
2. Mechanical ability
3. A knowledge of electricity

**THEY SHOULD BE ABLE TO:**

1. Handle and lift heavy equipment
2. Reach, lift, stoop, pull and push
3. Use their eyes in close work
4. Read blueprints
5. Work in awkward or cramped positions for extended periods of time
6. Find electrical and mechanical problems quickly

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are machine shop practice, shop, electricity, welding, mechanical drawing, physics, and mathematics.

**AFTER HIGH SCHOOL:**

1. Most employers prefer to hire high school graduates and train them on the job. It takes from three to four years of training as a helper to learn the necessary skills of this job.
2. Additional schooling in related subjects such as electricity, welding, blueprint reading, etc., at one of Utah's trade schools will help you find a better job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, furnace installers and repairmen earned from \$2.50 to \$4.00 an hour depending upon the type of work they performed. Workers in the construction industry earned more an hour than those doing repair work but didn't work as many weeks a year.
2. Their starting salary was from \$1.50 to \$2.50 depending upon their skill and schooling.

WHAT ARE WORKING CONDITIONS LIKE?

1. Installers working in the construction industry may be laid off during the winter months. They may also do some traveling throughout the state to different construction projects.
2. You may be required, at times, to work at great heights while installing equipment or repairing it.
3. Some of the work must be done in awkward and cramped positions.
4. There is a danger of electrical shock and burns from using torches.
5. You will have to do some lifting of heavy equipment which could possibly lead to muscle strain.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Most of Utah's furnace installers and repairmen are located in the Wasatch Front area (Box Elder, Weber, Davis, Salt Lake and Utah counties).

**TYPE OF INDUSTRY:**

Construction companies, heating contractors, and companies that manufacture and install heating equipment hire most furnace installers. Large factories and buildings employ many furnacemen to do repair work. Some work for themselves or for repair shops making service calls.

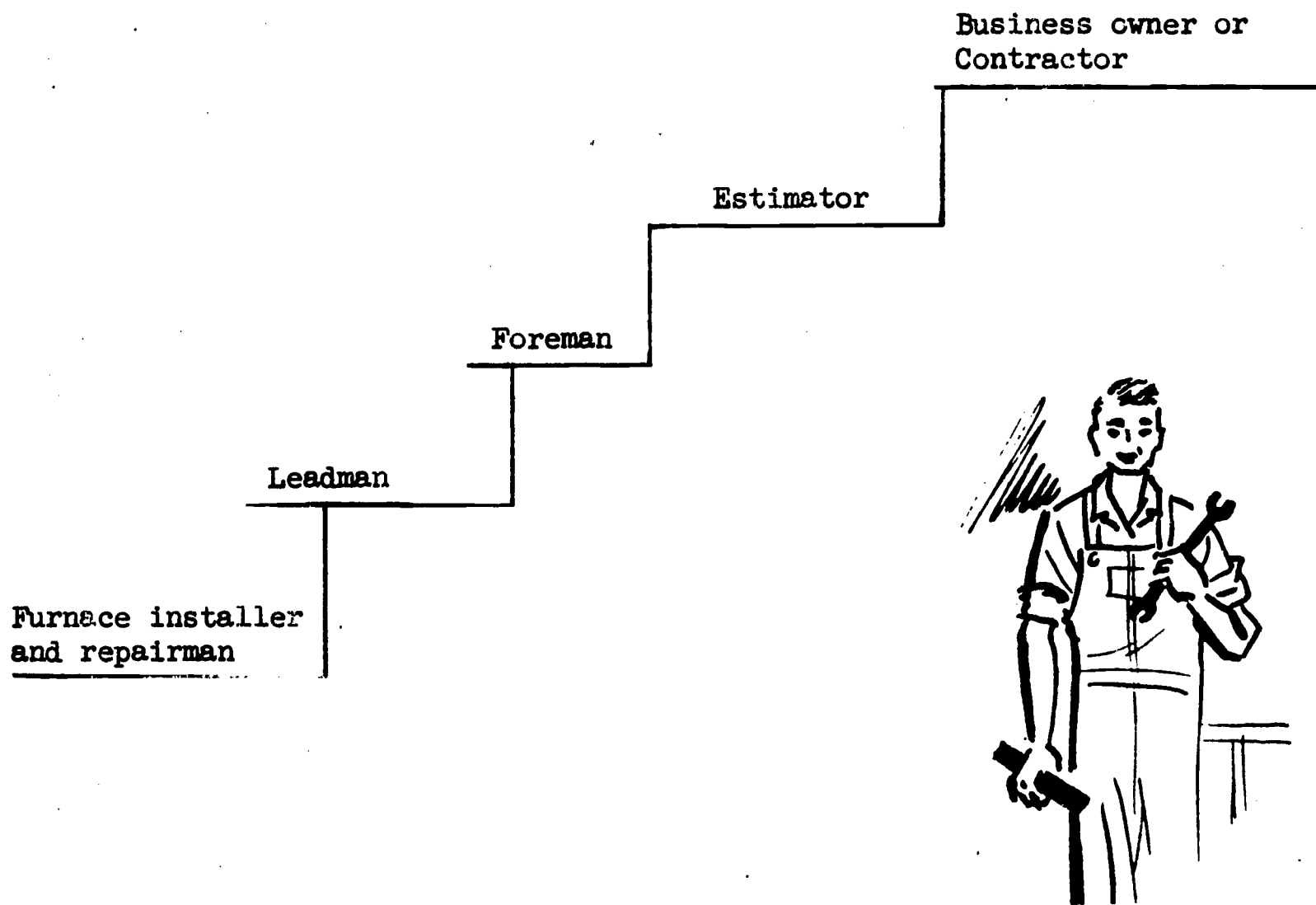
**Vocational Information For Education and Work**

Furnace Installer and Repairman - DOT Code 869.281  
(July 67)

IS THERE A NEED FOR FURNACE INSTALLERS AND REPAIRMEN?

1. In 1965 there were 185 furnace installers and repairmen in Utah. It is predicted that by 1970 this number will increase to 194.
2. The need for furnace installers will depend on the construction industry. If there is a growth in the construction industry, then there will be a need for extra furnace installers.

CAN YOU ADVANCE?



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**YOU ARE A FURNACE MAN****WHAT DO FURNACE MEN DO?****THEY:**

1. Operate huge furnaces which are hot enough to turn metal ores into liquid state
2. Shovel limestone, coal, and other materials into the furnaces
3. Regulate air and fuel valves to control the flame and the amount of heat
4. Remove the waste material that floats to the top of the liquid metal
5. Remove a plug in the bottom of the furnace which lets the liquid metal flow down a trough and into a mold.

**THEY MAY ALSO:**

1. Work mainly with iron or steel, or work mainly with copper, lead, and zinc
2. Patch the furnace lining with special clay.

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WHAT SHOULD FURNACE MEN BE LIKE?

## THEY SHOULD BE:

1. In good physical condition
2. Capable of using both hands and legs normally
3. Industrious
4. Dependable

## THEY SHOULD HAVE:

1. Normal vision
2. Above average strength
3. Some mechanical ability

## THEY SHOULD BE ABLE TO:

1. Stand for long periods of time
2. Tolerate dirt, dust, heat, and noise
3. Do strenuous work

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are all shop courses, physical science, and English.

## AFTER HIGH SCHOOL:

Most employers require a high school diploma but no additional schooling. Training will be recieved on the job; most employees start as helpers or laborers, and learn how to be furnace men through experience.

### HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average wage for furnace men in Utah was \$3.50 per hour.
2. Their starting salary was \$2.30 per hour.
3. Some furnace men made as much as \$7.00 per hour.

### WHAT ARE WORKING CONDITIONS LIKE?

1. The work can be hazardous, but safety regulations are observed and accidents kept at a minimum.
2. Working close to furnaces may cause discomfort from the heat.
3. Furnaces must operate 24 hours a day and furnace men must often work night shifts, on holidays, and weekends.
4. The work is strenuous and tiring and you will get dirty and grimy.
5. Working very close to the furnace, you will need to wear protective clothing, such as an asbestos suit.

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION:

About 50% of the furnace men in Utah are employed in Utah County, and about 30% in Salt Lake County. The remaining 20% work in other areas of the state.

#### TYPE OF INDUSTRY:

Most of the furnacemen in Utah are employed by Geneva Steel, Kennecott Copper, and some smaller foundries.

## Vocational Information For Education and Work

Furnace Man -- DOT Code 504.886 (July 1967)

IS THERE A NEED FOR FURNACE MEN?

1. In 1965 there were 500 furnace men in Utah.
2. This number is expected to remain about the same, with job openings coming through normal turnover and retirement.

CAN YOU ADVANCE?

(Helpers start at grade 1 or 2 and may advance through to step 32).



Furnace Man Helper (grade 1)

Furnace Man (grade 3)

Foreman (grade 32)

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**YOU ARE A GENERAL OFFICE CLERK****WHAT DO GENERAL OFFICE CLERKS DO?**

**THEY PERFORM A VARIETY OF OFFICE JOBS DEPENDING UPON THE KIND AND SIZE OF OFFICE IN WHICH THEY WORK.**

**THEY:**

1. File records, letters, applications, and other kinds of forms
2. Type letters, reports, and other documents
3. Pull records and other material from the files as it is needed
4. Open, read, and sort incoming mail
5. Order and distribute supplies
6. Operate a variety of office machines such as adding and duplicating machines
7. Answer the telephone and take messages
8. Keep records of personnel, stock, inventory and other items
9. Answer questions from the public and other workers concerning office matters

**THEY MAY ALSO:**

1. Write letters for others
2. Prepare bills and invoices and mail them to customers and clients
3. Prepare and sign payroll checks

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WHAT SHOULD GENERAL OFFICE CLERKS BE LIKE?

## THEY SHOULD BE:

1. Accurate
2. Cooperative
3. Neat
4. Polite

## THEY SHOULD HAVE:

1. Good vision and hearing
2. Good finger coordination
3. Clerical ability
4. An ability to work with numbers

## THEY SHOULD BE ABLE TO:

1. Use basic arithmetic
2. Follow written and verbal instructions accurately
3. Work carefully under pressure
4. Sit for long periods of time
5. Work without close supervision
6. Do accurate work in spite of interruptions
7. Spell correctly and write legibly

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are English, business arithmetic, typing, and other business preparation courses.

## AFTER HIGH SCHOOL:

1. Most employers require a high school diploma but no additional schooling.
2. Additional training in business from business colleges, trade schools, or universities will help you find a better job.

### HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for general office clerks was from \$1.60 - \$2.00 an hour depending upon their experience and where they worked.
2. Their starting pay was from \$1.40 - \$1.75 an hour depending upon their skill.
3. Some general office clerks made more than \$2.00 an hour depending upon the responsibility they were given and their experience.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Most offices are clean, well-lighted and well-ventilated.
2. The work is not hard but can be mentally or emotionally tiring during rush periods.
3. You may work with two or three people in a small office or with several hundred in a large government or industrial office.
4. Office work may, at times, become routine and monotonous.

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION:

Over 80% of Utah's office clerks are employed in the Ogden-Salt Lake-Provo area. The other 20% are scattered throughout the state.

#### TYPE OF INDUSTRY:

Office clerks are employed by almost every kind of business establishment, large and small, and by government agencies.

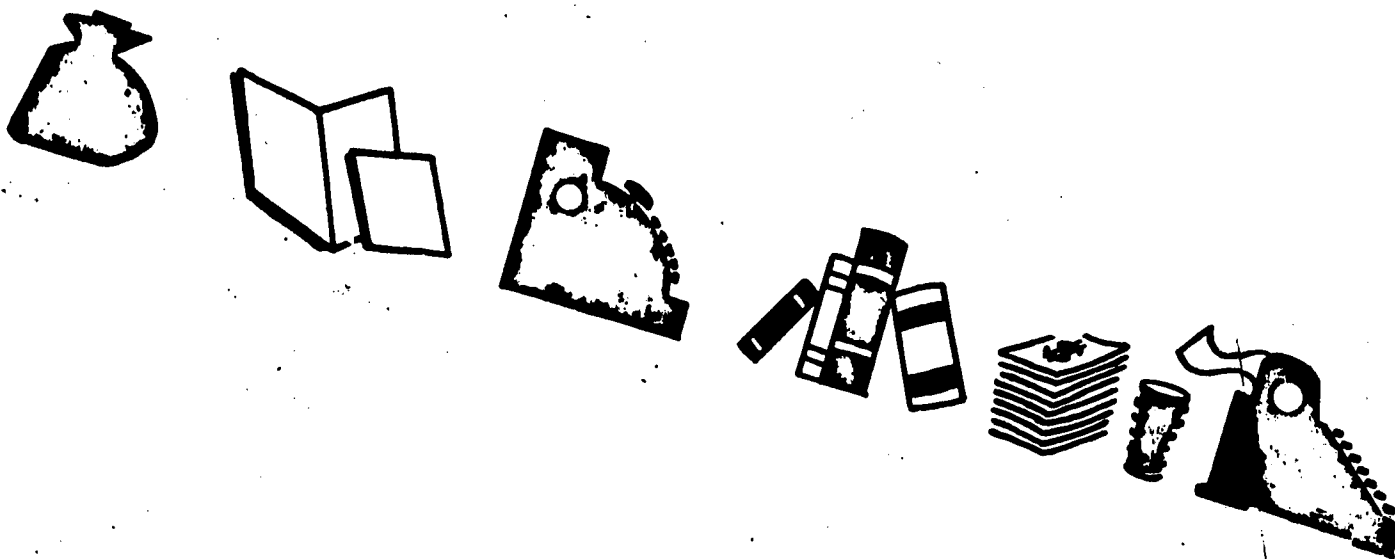
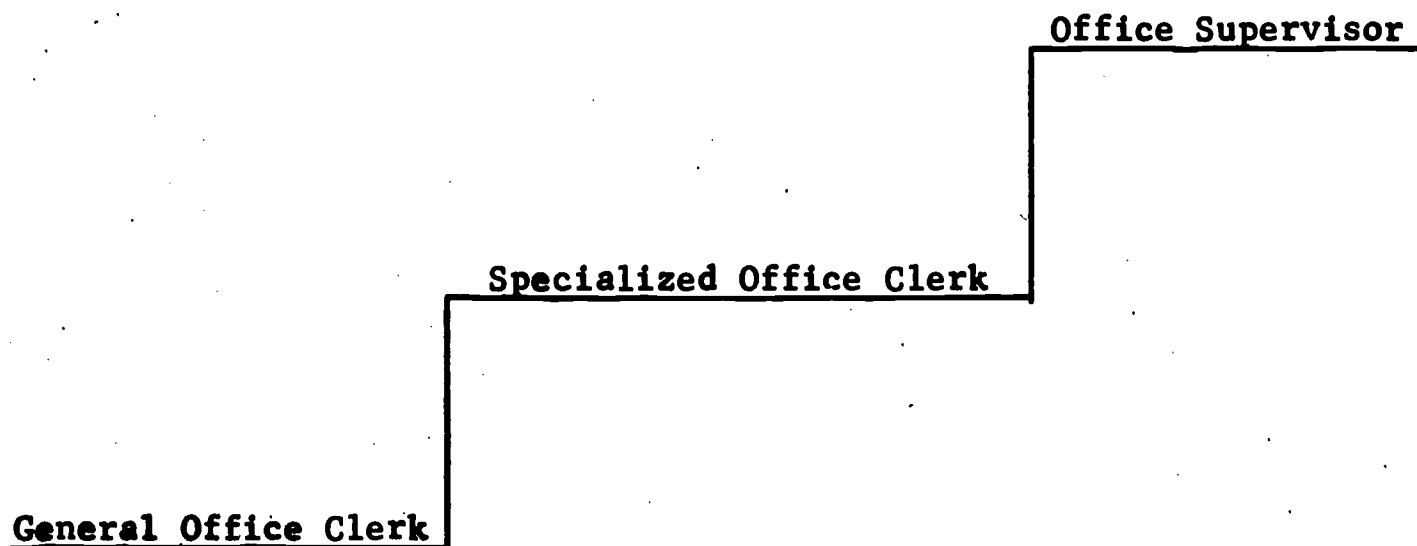
## Vocational Information For Education and Work

General Office Clerk - DOT Code 219.388  
(July 67)

IS THERE A NEED FOR GENERAL OFFICE CLERKS IN UTAH?

1. In 1965, there were 4,950 office clerks in Utah. It is predicted that by 1970, this number will increase to 5,825.
2. This field is dominated by women. There is a high turnover among women employees since many of them quit to marry or raise families.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
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## YOU ARE A GLAZIER

WHAT DO GLAZIERS DO?

THEY CUT GLASS INTO REQUIRED SIZES AND SHAPES BY:

1. Guiding the glass cutter along the glass using a ruler or following a drawing under the glass
2. Breaking away the excess glass by hand or by tapping it with the handle of their cutter
3. Grinding the glass on an iron or stone grinding wheel to smooth rough or chipped edges
4. Polishing the glass on cork or felt wheels to remove surface defects

THEY INSTALL GLASS IN NEW BUILDINGS SETTING IT IN WINDOWS, DOORS, SKYLIGHTS, STORE FIXTURES, CABINETS AND SHOWER DOORS BY:

1. Spreading a thin layer of putty around the frame that holds the glass
2. Pressing the precut glass in the putty and fastening it in place with wire clips
3. Sealing the glass in the frame by spreading another layer of putty around its edge

SOME GLAZIERS SPECIALIZE AS EITHER SHOP MEN (CUTTING THE GLASS) OR AS INSTALLATION MEN.

THEY REPLACE BROKEN GLASS IN AUTOMOBILES AND BUILDINGS.

THEY MAY ALSO INSTALL STRUCTURAL GLASS ON THE FRONT OF BUILDINGS, WALLS OR CEILINGS.

WHAT SHOULD GLAZIERS BE LIKE?

## THEY SHOULD BE:

1. In good physical condition
2. Neat workers

## THEY SHOULD HAVE:

1. Good eyesight
2. An ability for using tools
3. Full use of both hands and legs

## THEY SHOULD BE ABLE TO:

1. Climb ladders and scaffolding
2. Lift and carry large panes of glass
3. Load and drive company trucks

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, mechanical drawing, metalwork and shop.

## AFTER HIGH SCHOOL:

1. The best way to train for this job is as an apprentice. As an apprentice, you will work under the supervision of a fully qualified glazier who will teach you the skills you need to know. You will also have some classroom instruction.
2. After four years as an apprentice, you may become a fully qualified worker, called a journeyman.
3. Some workers do not train as apprentices but work as helpers. Opportunities for helpers are not nearly as good as for journeymen.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the union wage for glaziers in construction was \$3.73 an hour.
2. Shop workers made less than construction workers averaging about \$3.00 an hour. However, their work is steady throughout the year, whereas the construction worker is subject to seasonal layoffs, especially in the winter.
3. The starting salary for apprentices is about half the journeyman's salary.

WHAT ARE WORKING CONDITIONS LIKE?

1. You may have to travel to a construction area some distance from your home.
2. You will work outdoors in all types of weather.
3. Minor cuts from glass edges and sharp tools are common in this occupation.
4. There is the danger of falls from scaffolding and back injuries from heavy lifting.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Approximately 85 - 90 percent of Utah's glaziers are employed in Box Elder, Weber, Davis, Salt Lake, and Utah counties.

## TYPE OF INDUSTRY:

Building construction, glazing contractors, glass stores and distributors, and glass repair and replacement shops employ almost all glaziers.

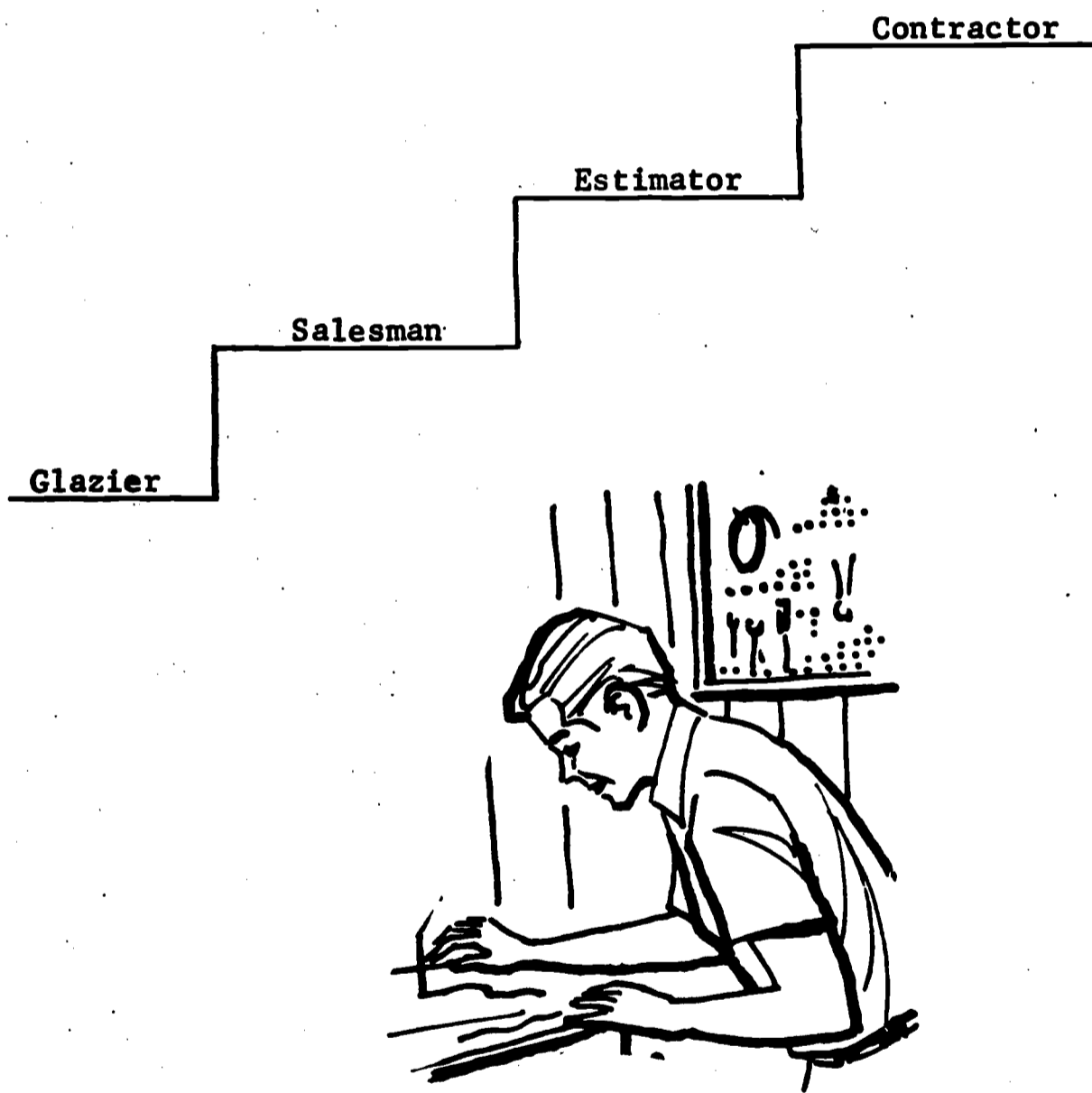
**Vocational Information For Education and Work**

Glazier - DOT Code 865.781  
(July 67)

IS THERE A NEED FOR GLAZIERS IN UTAH?

1. In 1965, there were 250 glaziers in Utah. It is predicted that by 1970, this number will increase to 300.
2. Although precut glass often enables workers in other trades to put glass in themselves, the trend to use more plate glass and structural glass in buildings will result in an increase in the need for glaziers.

CAN YOU ADVANCE?



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## YOU ARE A GROCERY CHECKER

### WHAT DO GROCERY CHECKERS DO?

THEY LIST AND TOTAL GROCERY PURCHASES, RECEIVE THE CUSTOMERS' MONEY, AND AND MAKE CHANGE. THIS INCLUDES:

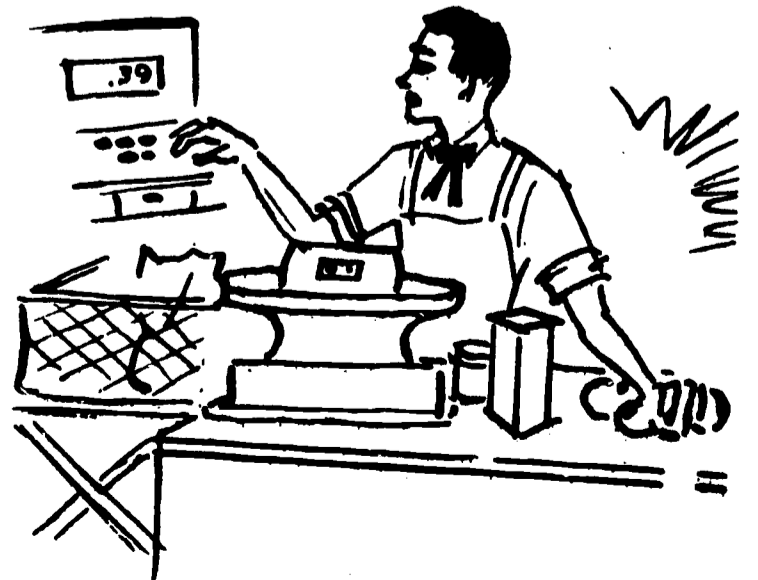
1. Lifting the customers' purchases from the shopping cart or counter
2. Ringing up each item on a cash register and calling out its price
3. Weighing produce and other items to determine their price
4. Totalling the sale and adding the correct tax
5. Receiving the cash or a check, making change, and if required, giving out trading stamps
6. Bagging or boxing the customers' purchases or calling for a bag boy.

THEY MAY ALSO:

1. Check incoming merchandise and pay salesmen
2. Handle small complaints and if necessary, give back money
3. Direct customers to different parts of the store

OTHER DUTIES THAT GROCERY CHECKERS MAY HAVE ARE:

1. Marking prices on merchandise
2. Stocking shelves
3. Taking inventory
4. Preparing displays
5. Sweeping and dusting .





WHAT SHOULD GROCERY CHECKERS BE LIKE?

## THEY SHOULD BE:

1. Courteous
2. Efficient
3. Friendly
4. Accurate
5. Honest
6. Fast

## THEY SHOULD HAVE:

1. Good finger coordination
2. Good vision and hearing
3. A pleasant personality and appearance
4. An ability to meet the public
5. An ability to work with numbers

## THEY SHOULD BE ABLE TO:

1. Handle money carefully and accurately
2. Stand for a long period of time
3. Work on their own without constant supervision
4. Work accurately under pressure
5. Make change correctly and use basic arithmetic
6. Lift, twist, bend and stoop to handle stock and groceries.

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL

Subjects that will help prepare you for this job are English, speech, arithmetic, business machine operation and other business and distributive education classes.

## AFTER HIGH SCHOOL

1. Most employers require a high school diploma. They also require some experience as a bagger or a shelf-stocker before they will train you as a checker.
2. Utah Technical College at Salt Lake City offers classes in checkstand training. These classes may be taken separately or as part of a nine-month course in marketing. This is valuable training for those who wish to become store managers.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, grocery checkers in Utah made from \$1.50 - \$2.50 an hour, depending upon their experience and length of time employed.
2. The starting salary for baggers was from \$1.25 - \$1.50 an hour. Grocery checkers generally begin at \$1.50 an hour after experience as a bagger or shelf-stocker.

WHAT ARE WORKING CONDITIONS LIKE?

1. Most grocery stores are open late in the evenings, weekends, (some on Sundays,) and sometimes on holidays.
2. During busy periods, there is pressure to hurry while still being accurate and pleasant.
3. The work area is often small and confined and sometimes located by the entrance where there may be a draft.

WHERE IN UTAH WILL YOU WORK?

## TYPE OF STORE

Supermarkets, shopping centers, and chain-grocery stores hire the majority of grocery checkers.

## GEOGRAPHICAL LOCATION

Most of the above establishments are located in the Wasatch front area consisting of Davis, Salt Lake, Utah, Weber and Box Elder counties.

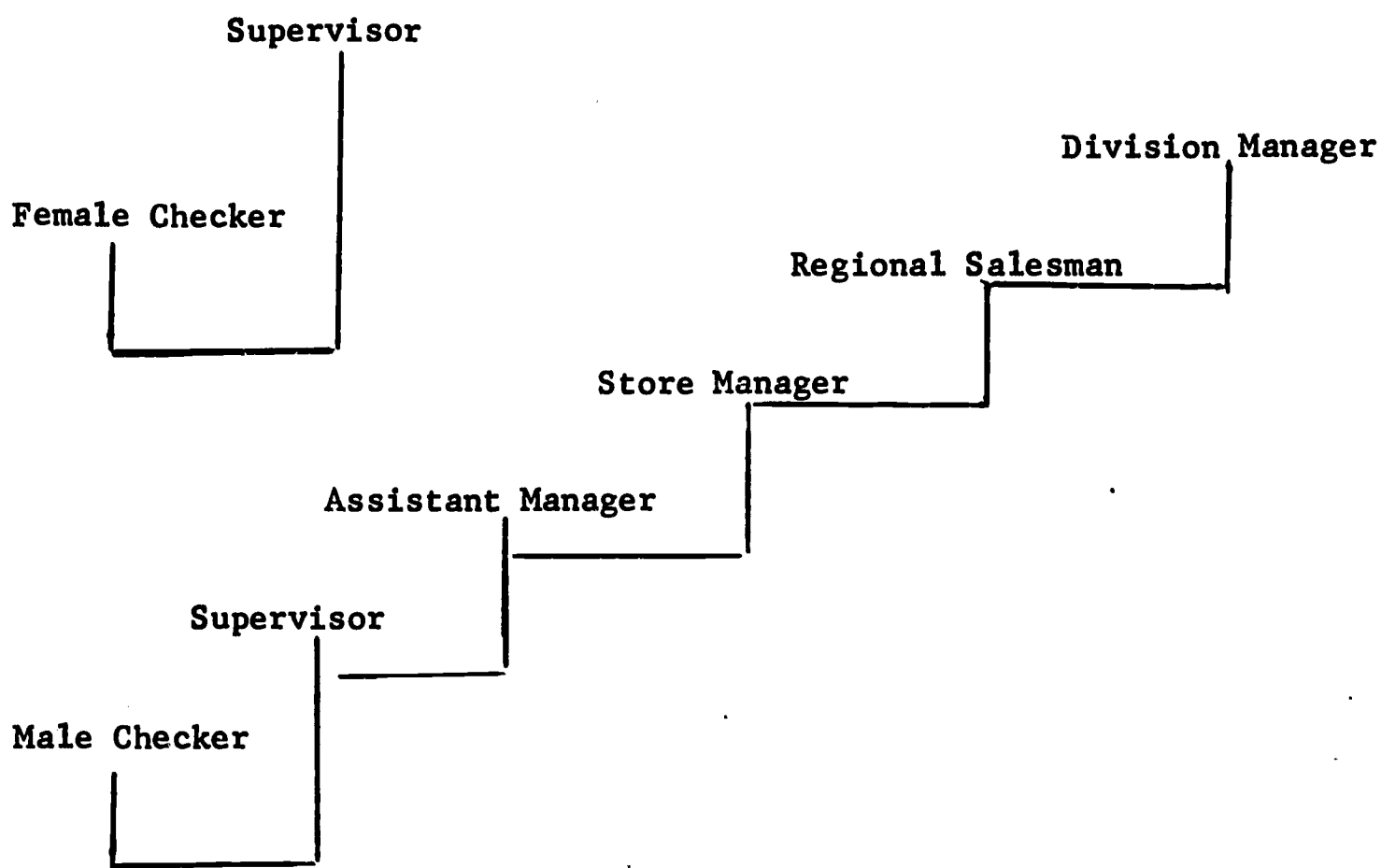
Vocational Information For Education and Work

Grocery Checker - DOT CODE 299.468  
(July 1967)

IS THERE A NEED FOR GROCERY CHECKERS IN UTAH?

1. In 1965, there were 1,676 grocery checkers in Utah. It is predicted that by 1970 this number will increase to 2,279.
2. The need for grocery checkers will continue to rise due to the continuous growth in population.
3. There are approximately three times as many women in this field as men.
4. There is a need for ambitious, capable young men who are potential managers. Many store managers begin as checkers.

CAN YOU ADVANCE?



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## YOU ARE A GARDENER

WHAT DO GARDENERS DO?

## THEY:

1. Water, trim, prune, and spray plants, shrubs, and trees
2. Mow and edge lawns
3. Remove litter from lawn and park areas
4. Apply fertilizers and insecticides to plants and lawns
5. Apply weed killing chemicals to roadsides
6. Prepare soil for planting
7. Plant and transplant flowers and shrubs

## THEY MAY ALSO:

1. Operate equipment such as power mowers, edgers, cultivators, electric clippers, and power sprayers
2. Drive a truck to haul away brush and debris
3. Repair the equipment they use
4. Repair fountain heads, swimming pools, and sprinkler systems

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WHAT SHOULD GARDENERS BE LIKE?

## THEY SHOULD BE:

1. In good physical condition
2. Dependable
3. Energetic

## THEY SHOULD HAVE:

1. An interest in the out-of-doors
2. Average strength
3. Good eye-hand coordination

## THEY SHOULD BE ABLE TO:

1. Do some strenuous work
2. Get along well with others
3. Work without close supervision

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are English and general education courses. For the person who intends to become a specialist, courses in science, biology, and agriculture (particularly ornamental Horticulture) are recommended.

## AFTER HIGH SCHOOL:

High school graduation is not required, but may be helpful in obtaining a job. Government employers usually hire on the basis of a written test.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for gardeners in Utah was \$2.00 per hour.
2. Their starting salary was from \$1.25 to \$1.50 per hour.
3. Some gardeners made as much as \$3.00 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. The work is almost always done out-of-doors in all types of weather.
2. The work is seasonal and during the winter months many gardeners are unemployed.
3. There is normally very little pressure in this work.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most of the job opportunities in Utah are found in Salt Lake, Utah, Davis, Weber, and Box Elder counties.

## TYPE OF INDUSTRY:

1. Most gardeners in Utah are employed by federal, state, and local government agencies.
2. Other opportunities are found in landscaping companies, nurseries, and private homes.

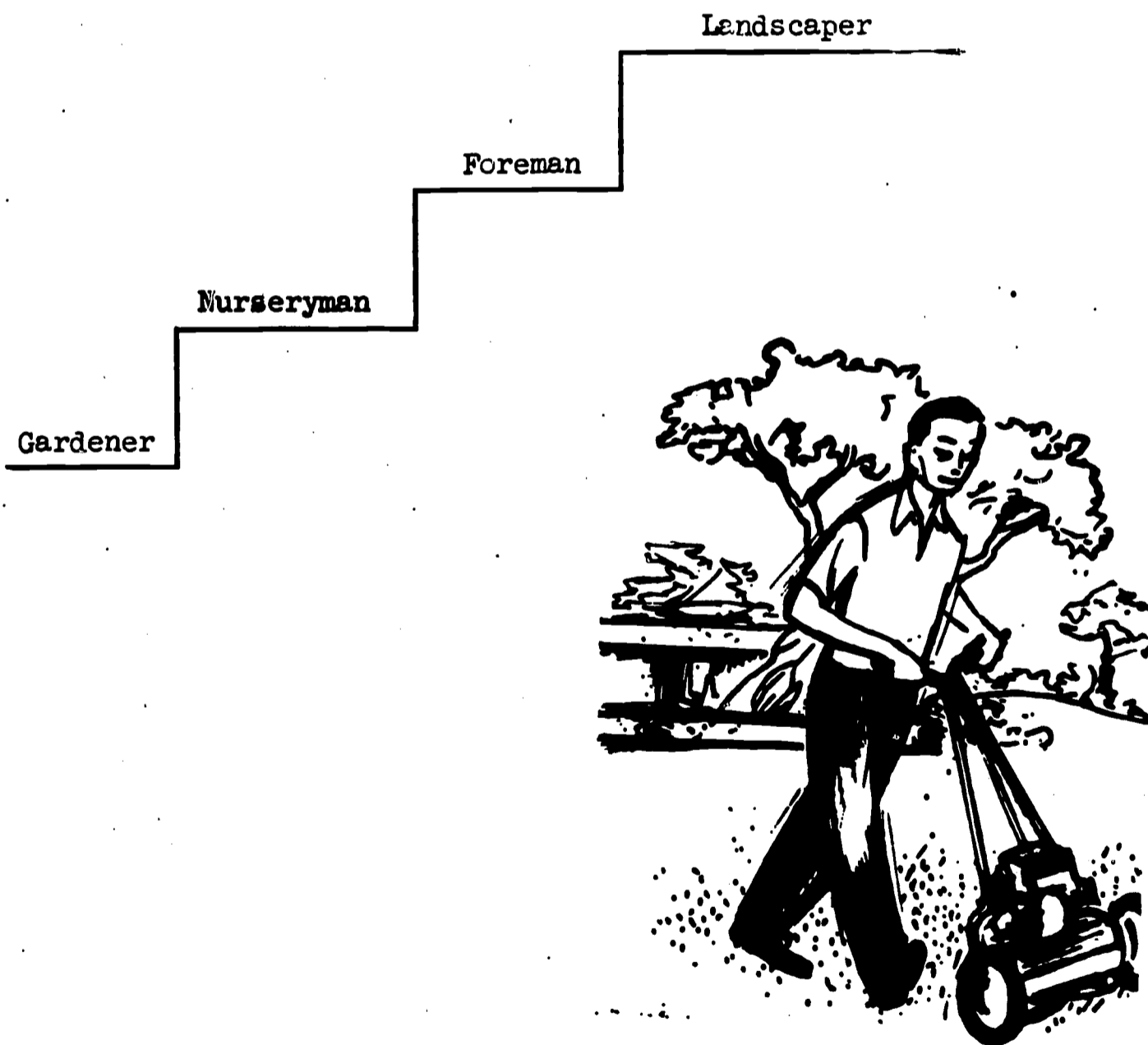
**Vocational Information For Education and Work**

Gardener - DOT Code 407.884  
(July 67)

IS THERE A NEED FOR GARDENERS?

In 1965 there were 460 gardeners in Utah. It is predicted that by 1970 this number will increase to 550.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



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**YOU ARE A GUARD****WHAT DO GUARDS DO?**

**THEY PROTECT PROPERTY FROM DAMAGE, FIRE, ROBBERY, AND INTRUDERS.**

**THEY:**

1. Patrol buildings and grounds on foot, to see that everything is in order, punching clocks to record where they've been and at what time they made their check
2. Make regular rounds to see that windows and doors are locked and lights are off
3. Ask or force people who do not belong on the property to leave
4. Make out reports of the day's activities.

**THEY MUST:**

1. Always be on the lookout for trouble including situations that might cause fire or accidents
2. Know where all fire exits, extinguishers, and alarms, as well as burglar alarms are located
3. Be ready for emergencies and know what to do in each case such as handle it alone, call for help, call the police or fire department, clear people out of the building, etc.

**THEY MAY ALSO:**

1. Be stationed in a particular area of a building to watch for shoplifters, thieves, and troublemakers or to prevent people who are not allowed in from entering.
2. Keep order in large groups of people and give information
3. Accompany messengers who are carrying money.



WHAT SHOULD GUARDS BE LIKE?

## THEY SHOULD BE:

1. Alert
2. Honest
3. Dependable
4. In good physical condition
5. Fairly strong

## THEY SHOULD HAVE:

1. No physical handicaps
2. Stable emotions
3. A knowledge of self-defense
4. Good eyesight and hearing
5. No police record

## THEY SHOULD BE ABLE TO:

1. Stand or walk for long periods of time
2. Defend themselves from any aggressor
3. Take care of emergency situations and act quickly
4. Handle guns properly and fire them accurately
5. Pass a physical examination.

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are physical education classes that help build your strength.

## AFTER HIGH SCHOOL:

Most employers prefer high school graduates who are capable of reading and writing out reports. Training received in the army, especially in the military police or any police training will help you get a better job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, guards in Utah made from \$ 300 - \$400 a month.
2. Their starting salary was from \$250 - \$300 a month.
3. Some guards made as much as \$500 a month.

WHAT ARE WORKING CONDITIONS LIKE?

1. You may work indoors or outdoors or both
2. You will stand and walk for long periods, sometimes as long as 12 hours at a time
3. You may have to do night work or shift work
4. You may spend most of your time alone
5. There are dangers from falls at night when it's dark, or from surprise attacks
6. Some guards are armed and others are not, depending on the nature of their work.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most of Utah's guards work in the Wasatch Front area (Box Elder, Weber, Davis, Salt Lake And Utah Counties) where large businesses and the major industries are located.

## TYPE OF INDUSTRY:

1. Large manufacturers, building contractors, banks, government installations and large retail stores employ the majority of guards.
2. Some guards work for agencies that provide services to organizations needing guards only occasionally for such things as art exhibits, sports events, conventions and other activities.

**Vocational Information For Education and Work**

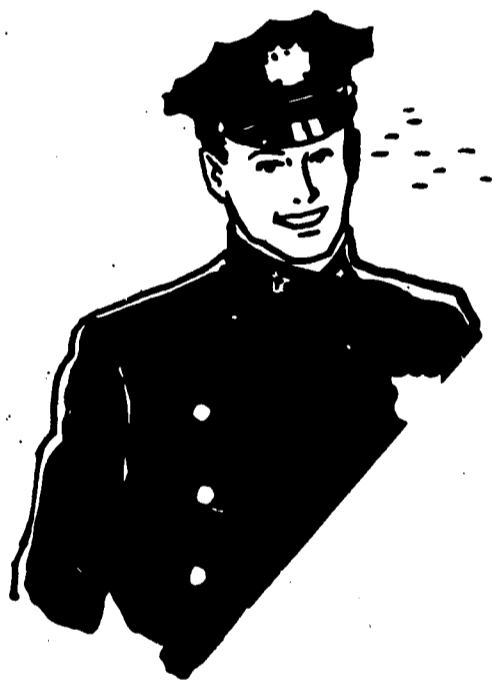
Guard - DOT CODE 372.868 (July 1967)

IS THERE A NEED FOR GUARDS IN UTAH?

1. In 1965, there were 632 guards in Utah. It is predicted, that by 1970, this number will increase to 705.
2. The need for guards will increase as business and industry grow.
3. This field is almost entirely for men. Many retired policemen continue to work as guards.

CAN YOU ADVANCE?

A guard is usually considered a "dead end" job. There are very few places to go from guard.



Guard

Supervisor (Large industries with many guards)

Investigator (Large agencies)

**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## YOU ARE A MAID

WHAT DO MAIDS DO?

## THEY:

1. Clean and service assigned areas
2. Sweep, mop, and wax floors
3. Dust and clean furniture
4. Change sheets and make beds
5. Wash and clean windows
6. Scrub and clean bathroom tubs, bowls, and mirrors

## THEY MAY ALSO:

1. Be assigned to a specific area in a hospital such as a surgical ward or maternity ward
2. Clean hospital equipment in operating rooms
3. Be in charge of the linen room
4. Wash walls and arrange furniture

WHAT SHOULD MAIDS BE LIKE?

## THEY SHOULD BE:

1. Neat
2. Courteous
3. Well mannered
4. Concerned with personal cleanliness
5. Dependable

## THEY SHOULD HAVE:

1. A concern for the comfort of others
2. A pleasant personality
3. Normal vision
4. A well groomed appearance

## THEY SHOULD BE ABLE TO:

1. Work well in spite of interruptions
2. Work under close supervision
3. Stand for long periods of time
4. Get along well with people

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are home economics, health, family relations, English, and physical education.

## AFTER HIGH SCHOOL:

Many employers require a high school diploma but no additional schooling. Training will be received on the job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for maids in Utah was \$60 per week.
2. Their starting salary was \$50 per week.
3. Some maids earned as much as \$85 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Most establishments are clean, well-lighted, and well-ventilated.
2. Maids who work in hospitals or nursing homes may be subject to disagreeable odors.
3. Maids normally work a 40 hour week, but they may be required to work weekends and holidays.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most of the maids in Utah work in the more populated areas of Salt Lake, Utah, Davis, Weber, and Box Elder Counties.

## TYPE OF INDUSTRY:

Maids work in hospitals, nursing homes, motels, hotels, and convalescent homes.

Vocational Information For Education and Work

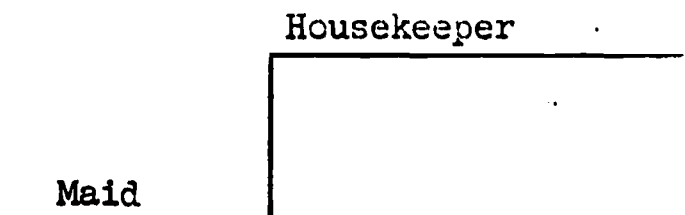
Maid - DOT Code 323.887  
(July 67)

IS THERE A NEED FOR MAIDS?

1. In 1965 there were 670 maids in Utah. It is predicted that by 1970 this number will increase to 830.
2. The need for maids will continue to rise due to normal turnover and increase in the number of resorts and motels.

CAN YOU ADVANCE?

Opportunities for advancement are very limited unless additional training is received.



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



## YOU ARE A HOUSEKEEPER

### WHAT DO HOUSEKEEPERS DO?

THEY PERFORM VARIOUS DUTIES IN PRIVATE HOMES.

THEY:

1. Do common household tasks such as cooking, cleaning, and ironing
2. Have overall responsibility for the operation of the household during working hours
3. May prepare the household budget
4. Plan the meals

THEY MAY SPECIALIZE IN A PARTICULAR TYPE OF HOUSEWORK:

Personal maids work in larger homes and attend to the needs of a particular member of the household.

Nursemaids care for the children in the home.

Day workers work in private homes on a part-time basis, and do just about any task in the household.

Live-in maids reside in the home all the time and receive board and room as part of the payment for their services.



WHAT SHOULD HOUSEKEEPERS BE LIKE?

**THEY SHOULD BE:**

1. Neat
2. Courteous
3. Well mannered
4. Concerned with personal cleanliness
5. Dependable

**THEY SHOULD HAVE:**

1. A concern for the comfort of others
2. A pleasant personality
3. Normal vision
4. A well groomed appearance

**THEY SHOULD BE ABLE TO:**

1. Work well in spite of interruptions
2. Work under close supervision
3. Stand for long periods of time
4. Get along well with people

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are home economics, health, family relations, and English.

**AFTER HIGH SCHOOL:**

High school graduation is not required, but may be helpful in obtaining a job. Training will be received on the job.

### HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for housekeepers in Utah was \$50 per week.
2. Their starting salary was \$45 per week.
3. Some housekeepers earned as much as \$65 per week.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions and hours vary according to the home and the employer.
2. Most homes where housekeepers are employed have modern conveniences, but housekeepers are usually required to do some strenuous work.
3. Jobs may only last for a short period of time.

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION:

Most housekeepers in Utah work in the more populated areas of Salt Lake, Utah, Davis, Weber, and Box Elder counties.

#### TYPE OF INDUSTRY:

Housekeepers work primarily in upper and middle class homes.

## Vocational Information For Education and Work

Housekeeper - DOT Code 303.138  
(July 67)

IS THERE A NEED FOR HOUSEKEEPERS?

1. In 1965 there were 2,000 housekeepers in Utah. It is predicted that by 1970 this number will increase to 2,200.
2. The need for housekeepers will continue to grow as the population of upper and middle class homes in Utah grows.

CAN YOU ADVANCE?

Some housekeepers may specialize in a particular type job. There is no opportunity to advance from this position.



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## YOU ARE AN INSTRUMENT REPAIRMAN

### WHAT DO INSTRUMENT REPAIRMEN DO?

THEY REPAIR SCIENTIFIC AND INDUSTRIAL INSTRUMENTS THAT CONTROL AND MEASURE HEAT, ELECTRICITY, PRESSURE, ALTITUDE AND OTHER SIMILAR THINGS.

#### THEY:

1. Make sure that the trouble is in the instrument and not in a connecting piece of equipment
2. Take the instrument apart and test its different parts using various kinds of equipment to locate the trouble
3. Use the appropriate tools to repair the defective part, or they replace it
4. Often follow blueprints or instruction books to reassemble the instrument
5. Test the instrument to make sure that it is working again

THEY CLEAN, LUBRICATE AND ADJUST INSTRUMENTS.

#### THEY MAY ALSO:

1. Install new instruments
2. Assist scientists and engineers in research laboratories in designing tests for instruments, and help prepare the instruments for test
3. Redesign instruments to get better results from them

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WHAT SHOULD INSTRUMENT REPAIRMEN BE LIKE?

## THEY SHOULD BE:

1. Patient
2. Persistent
3. Attentive
4. Mechanically inclined
5. In good physical condition

## THEY SHOULD HAVE:

1. Good judgment
2. Excellent vision and good hearing
3. Good color vision
4. Good finger coordination
5. Full use of arms and legs

## THEY SHOULD BE ABLE TO:

1. Do precision work
2. Learn technical material and follow technical instructions
3. Work well without supervision
4. Find trouble fast in defective instruments
5. Work on many types of instruments

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

1. Subjects that will help prepare you for this job are mathematics, algebra, geometry, physics, chemistry, radio and electricity, and and machine shop practice.
2. Building nam radio sets and hi-fi sets is good experience.

## AFTER HIGH SCHOOL:

1. The best way to train for this job is as an apprentice. As an apprentice, you will spend four years under the supervision of a fully qualified repairman, called a journeyman, who will teach you the skills of the trade. You will also have some classroom instruction, probably at one of the Utah Technical Colleges.
2. Some workers do not train as apprentices but work as helpers. Opportunities for helpers are not nearly as good as for journeymen.
3. Army technical schools offer excellent training in this field.
4. Additional courses in electronics at any of Utah's vocational schools or junior colleges will also be helpful.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, instrument repairmen in Utah earned from \$3.00-\$4.00 an hour.
2. Those specializing in research and development usually made more.
3. Apprentices begin at a salary of about half the regular worker's

WHAT ARE WORKING CONDITIONS LIKE?

1. Depending upon the type of industry you work for, you may:
  - a. Do your repair work right on the spot amid the noise and grease of factory machines
  - b. Do your repair work at a bench in a clean, quiet shop
  - c. Work outdoors in all kinds of weather
  - d. Travel to different locations to do work for various companies
2. Night shifts are common in many factories.
3. You may have to work in awkward positions, from a ladder and possibly by high voltage equipment.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION

The majority of Utah's instrument repairmen work at Hill Air Force Base or for some other company located in the Wasatch Front area of Box Elder, Davis, Salt Lake, Utah, and Weber counties.

## TYPE OF INDUSTRY

Petroleum refineries, chemical plants, gas and electric companies, instrument manufacturers, airlines, and the missile industry employ the majority of instrument repairmen.

**Vocational Information For Education and Work**

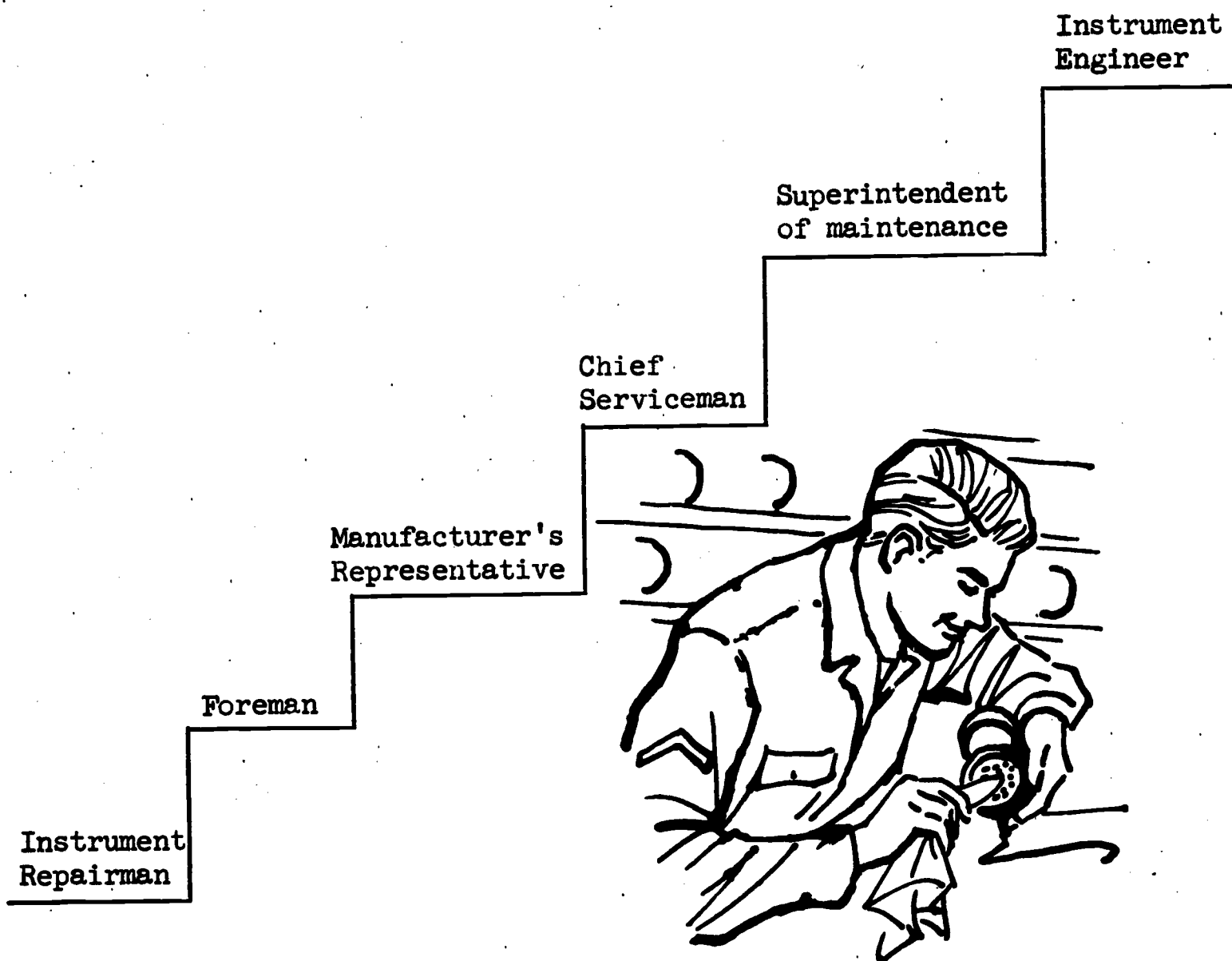
Instrument Repairman - DOT Code 710.281  
(July 67)

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IS THERE A NEED FOR INSTRUMENT REPAIRMEN IN UTAH?

1. In 1965, there were approximately 1,000 instrument repairmen in Utah. It is predicted that by 1970 this number will increase to 1,200.
2. The need for instrument repairmen will continue to rise due to the growth of the electronics industry and the increase in automation.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## YOU ARE A JANITOR

### WHAT DO JANITORS DO?

THEY ARE RESPONSIBLE FOR THE CLEANING AND MAINTENANCE OF VARIOUS ESTABLISHMENTS

THEY:

1. Sweep, vacuum, mop, and wax floors
2. Dust and polish furniture
3. Clean and supply restrooms
4. Wash walls and ceilings
5. Collect and dispose of wastepaper and other refuse
6. Replace light bulbs and fluorescent tubes
7. Clean and maintain the equipment they use.

THEY MAY ALSO:

1. Specialize in a particular type of work such as floor maintenance, wall washing, or waxing and polishing
2. Work in an industrial plant and clean machinery
3. Do some work out of doors such as sweeping walks, shoveling snow, raking leaves and watering the lawn.
4. Take care of the heating, ventilating, lighting, and watering facilities of the building and grounds
5. Make minor repairs on the equipment in a building.

WOMEN WHO WORK IN THIS FIELD ARE CALLED CLEANING WOMEN OR CHARWOMEN

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**WHAT SHOULD JANITORS BE LIKE?****THEY SHOULD BE:**

1. Dependable
2. Trustworthy
3. In good health

**THEY SHOULD HAVE:**

1. A well-groomed appearance
2. Some mechanical ability
3. Average coordination

**THEY SHOULD BE ABLE TO:**

1. Do some strenuous work
2. Do monotonous work on a continuous basis
3. Work without close supervision
4. Tolerate dirt and dust

(For a detailed description of your capabilities, see your counselor.)

**WHAT TRAINING WILL PREPARE YOU****IN HIGH SCHOOL:**

1. Subjects that will help prepare you for this job are shop courses, and English
2. Graduation from high school is not essential, but will help you obtain a better job

**AFTER HIGH SCHOOL:**

1. Training will be received on the job. Most employers are willing to train someone who has a sincere desire to learn
2. Adult classes in the public schools are offered from time to time to acquaint you with new procedures and equipment
3. Equipment manufacturers sometimes offer special short classes to teach you the details of their equipment

**HOW MUCH MONEY WILL YOU MAKE?**

1. In 1966, the average salary for janitors in Utah was \$1.75 per hour
2. Their starting salary was from \$1.20 to \$1.60 per hour
3. Some janitors made as much as \$2.60 per hour.

**WHAT ARE WORKING CONDITIONS LIKE?**

1. The work may involve standing, walking, stooping, lifting, carrying, pushing, climbing, and reaching
2. The work is usually done indoors
3. Janitors usually work alone
4. Much of the work is done at night and on weekends.

**WHERE IN UTAH WILL YOU WORK?****GEOGRAPHICAL LOCATION:**

Most janitors work in the larger cities located in Salt Lake, Utah, Davis, Weber, and Box Elder counties

**TYPE OF INDUSTRY:**

Janitors in Utah work for factories, business offices, churches, schools, hotels and apartments, hospitals, janitorial firms, and for federal, state, and local governments.

**Vocational Information For Education and Work**

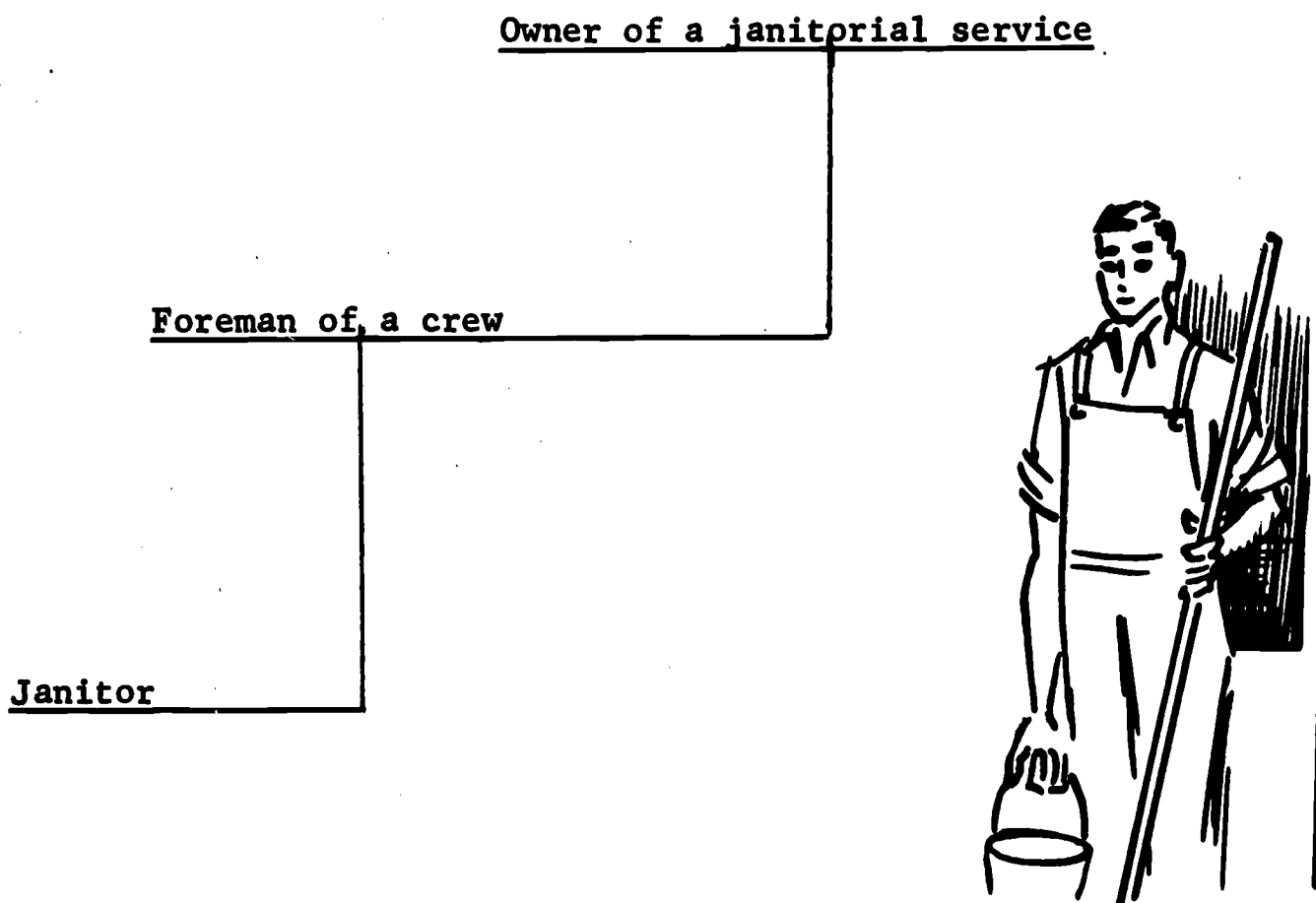
Janitors - DOT CODE 381. 887 (July 1967)

IS THERE A NEED FOR JANITORS?

1. In 1965 there were 1400 janitors in Utah. It is predicted that by 1970 this number will increase to 2300.
2. The need for janitors is expected to increase as the population does.

CAN YOU ADVANCE?

Opportunities for advancement are very limited.



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



YOU ARE A KEYPUNCH OPERATOR

WHAT DO KEYPUNCH OPERATORS DO?

THEY RECORD ACCOUNTING AND STATISTICAL DATA ON CARDS BY PUNCHING A SERIES OF HOLES IN THE CARDS.

THEY:

1. Operate a machine that is similar to an electric typewriter.
2. Press keys on the machine to record information
3. Insert, put in position, and eject cards by operating controls on the machine
4. Either use a machine that has numbers only, or one that has both numbers and letters to record information
5. Observe machine operation to detect faulty operation
6. Remove jammed cards from the machine with a prying tool
7. Set and adjust the machine to do different operations.

THEY MAY ALSO:

1. Operate related machines such as collators, interpreters, reproducers, sorters, and verifiers.
2. Do some general office work

WHAT SHOULD KEYPUNCH OPERATORS BE LIKE?**THEY SHOULD BE:**

1. Neat
2. Fast
3. Accurate
4. Dependable

**THEY SHOULD HAVE:**

1. Good finger coordination
2. Good eye-hand coordination
3. Good vision
4. Clerical aptitude

THEY SHOULD BE ABLE TO:

1. Work under pressure
2. Work rapidly and accurately
3. Sit for long periods of time
4. Concentrate on details for long periods of time
5. Do repetitious work

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?**IN HIGH SCHOOL:**

Subjects that will help you prepare for this job are typing, business arithmetic, office machine practice, and English

**AFTER HIGH SCHOOL:**

1. High school graduation is essential.
2. Most employers require someone who has completed a course in key punch operation. These courses are offered at Utah Technical College, Salt Lake and Provo, and at Brigham Young University; a few private trade schools also offer courses in key punch operation.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, keypunch operators in Utah made an average salary of \$75 per week
2. Their beginning salary was \$65 per week
3. Some keypunch operators made as much as \$110 per week

WHAT ARE WORKING CONDITIONS LIKE?

1. The work is usually performed in a well-lighted, well ventilated room
2. There are usually a number of keypunch operators working in a room, and the noise may be very loud
3. Doing close work for long periods of time may cause eyestrain.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Most keypunch operators work in the cities of Salt Lake, Ogden, and Provo, with a small number working in other areas throughout the state.

**TYPE OF INDUSTRY:**

1. Research centers, larger businesses, banks, data processing companies, governmental agencies, and schools all hire keypunch operators.
2. The Internal Revenue Service hires and trains 500 to 600 keypunch operators for part time work during the year.

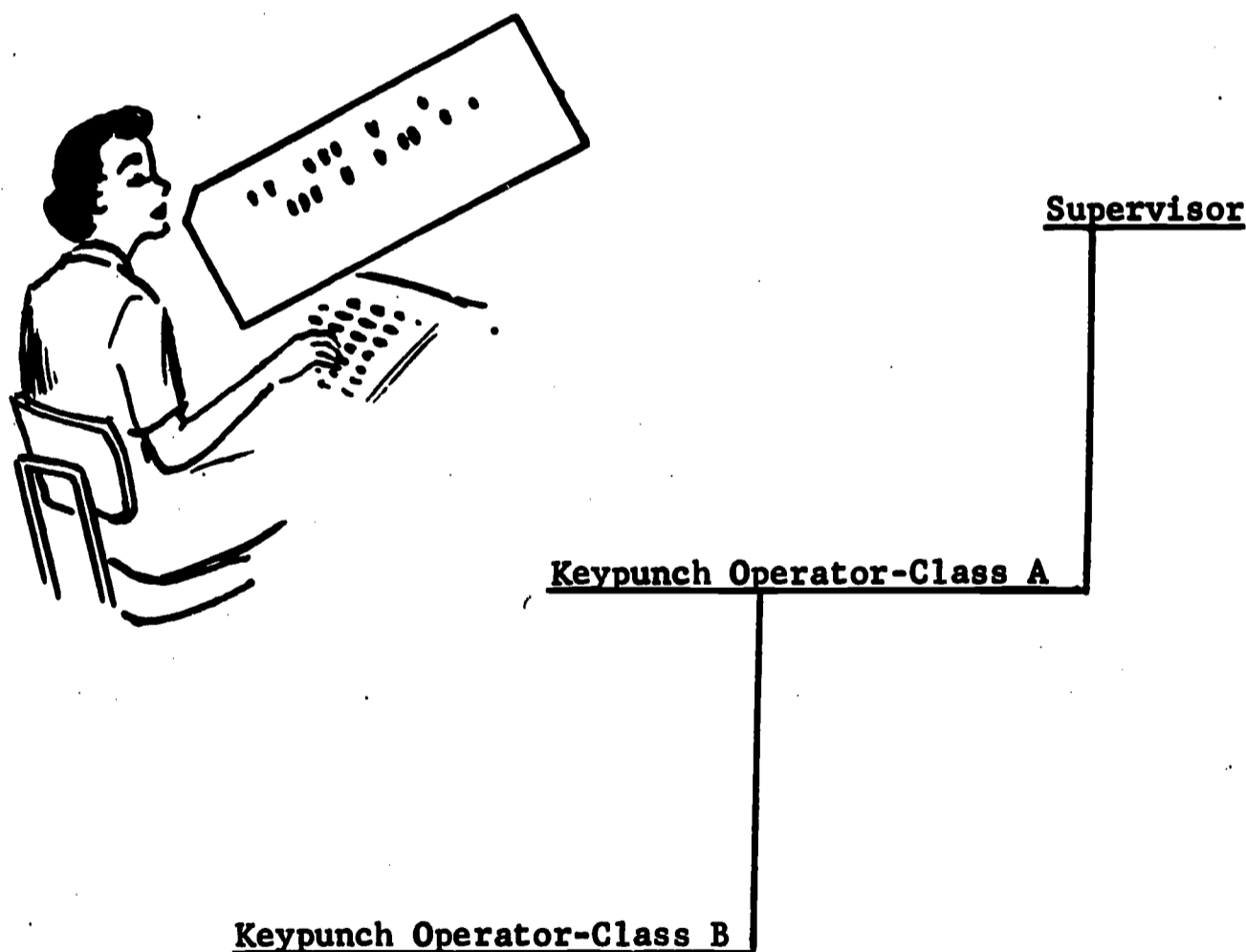
**Vocational Information For Education and Work**

Keypunch Operator -- DOT Code 213.582  
(July 1967)

IS THERE A NEED FOR KEYPUNCH OPERATORS?

1. In 1965 there were 1780 keypunch operators in Utah. It is predicted that by 1970 this number will increase to 1870.
2. The demand for skilled keypunch operators is very great, but inexperienced keypunch operators may have difficulty in obtaining a position.

CAN YOU ADVANCE?



Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security



## YOU ARE A KITCHEN HELPER

WHAT DO KITCHEN HELPERS DO?

## THEY:

1. Assist cooks in the preparation of food.
2. Clean and prepare vegetables.
3. Place linen, silverware, glassware, and napkins on tables.
4. Sweep and mop the kitchen and other areas.
5. Wash dishes by hand or use a dishwashing machine.
6. Carry out garbage and trash.

## THEY MAY ALSO:

1. Make coffee, toast, and prepare other foods.
2. Serve patients in a hospital.
3. Act as a busboy or serve food to customers.
4. Perform a single task, such as washing pots and pans, in larger restaurants.
5. Perform a great variety of work in smaller establishments.



WHAT SHOULD KITCHEN HELPERS BE LIKE?

## THEY SHOULD BE:

1. Well mannered
2. Dependable
3. Free from contagious diseases

## THEY SHOULD HAVE:

1. Clean personal habits
2. Average strength

## THEY SHOULD BE ABLE TO:

1. Stand for long periods of time
2. Tolerate heat
3. Work rapidly
4. Work under supervision at times, and with a minimum of supervision at other times

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are home economics, health, English, and shop courses.

## AFTER HIGH SCHOOL:

1. Most employers require a high school education, but no further preparation. Training will be received on the job.
2. You must pass a health examination to qualify for the position.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for kitchen helpers in Utah was \$1.75 per hour.
2. Their starting salary was from \$1.15 to \$1.60 per hour.
3. Some kitchen helpers earned as much as \$2.25 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Kitchen work is likely to involve heat and steam much of the time. Kitchens vary from dark, cluttered, and dirty to bright, neat, and sparkling.
2. The work may be strenuous at times, involving some heavy lifting.
3. Doing the same work each day may be very monotonous.
4. You may have to work on weekends and holidays.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most kitchen helpers in Utah work in the larger cities located in Salt Lake, Utah, Davis, and Weber Counties.

## TYPE OF INDUSTRY:

Restaurants, hotels, motels, hospitals, and other eating establishments hire kitchen helpers.

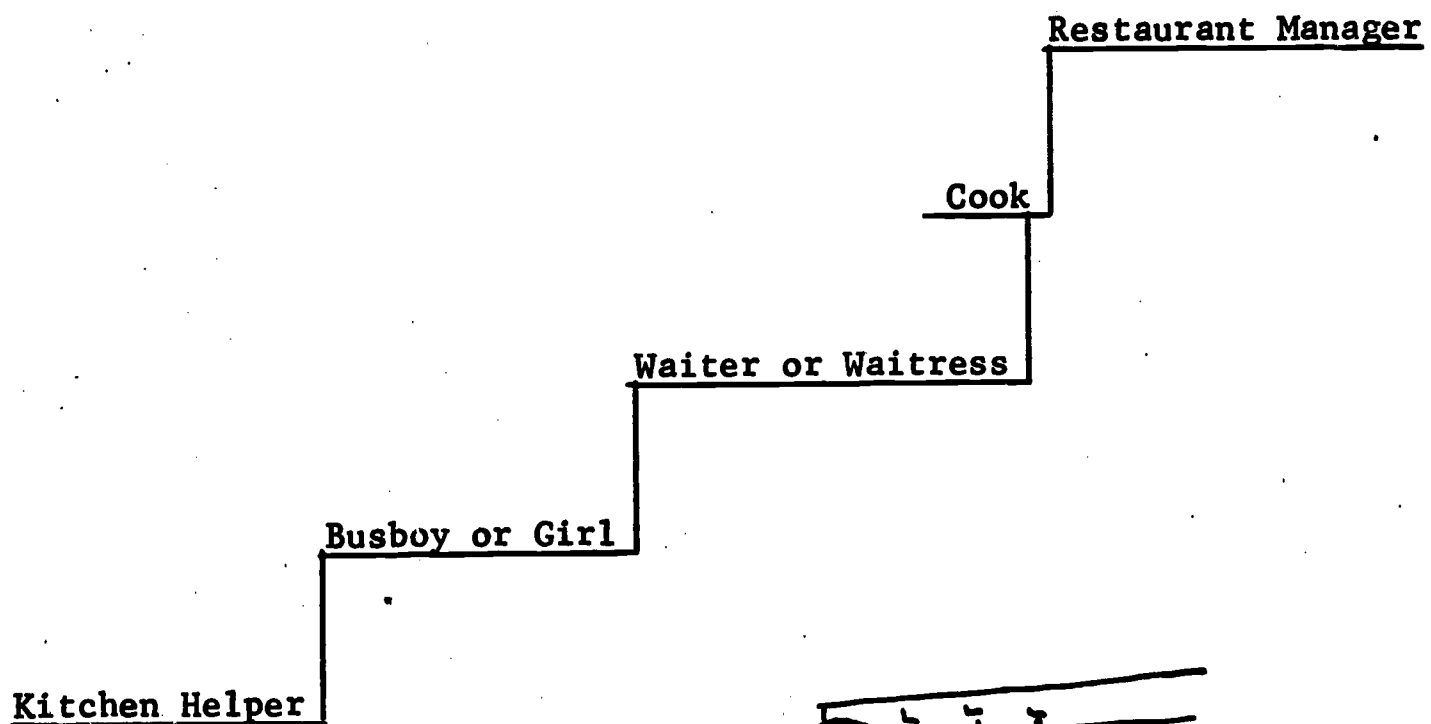
Vocational Information For Education and Work

Kitchen Helper - DOT Code 318.887  
(July 67)

IS THERE A NEED FOR KITCHEN HELPERS?

1. In 1965 there were 2,200 kitchen helpers in Utah. It is predicted that by 1970 this number will increase to 3,300.
2. The need for kitchen helpers will continue to increase during the next ten years due to the increase in the number of restaurants and hotels.

CAN YOU ADVANCE?



Prepared Cooperatively By:  
 Utah State Board of Education  
 Utah State Department of Employment Security



## YOU ARE A LABORATORY TECHNICIAN

WHAT DO LABORATORY TECHNICIANS DO?

THEY PERFORM ROUTINE LABORATORY TESTS UNDER THE SUPERVISION OF A CHEMIST, ENGINEER, OR SCIENTIST.

## THEY:

1. Gather information which they record in the form of reports, graphs, and charts for the professional staff to look at
2. Conduct tests on liquid, gaseous, and solid materials to determine their chemical content in order to be sure that they are suited for their intended use
3. Check the quality of different materials, metals, and liquids before they are put to use
4. Test mixtures to make sure that they contain the proper combination of ingredients
5. Test finished products to see if they conform to standards of quality and strength
6. Prepare samples for the professional staff to analyze
7. Record test results and prepare test reports

THEY MAINTAIN THE LABORATORY.

## THEY ALSO:

1. Clean and sterilize laboratory equipment
2. Set up the laboratory equipment
3. Make or repair glass equipment
4. Prepare materials for testing
5. Mix chemical solutions
6. Keep the necessary supply of chemicals and equipment on hand.

MOST TECHNICIANS BEGIN AS LABORATORY ASSISTANTS, DOING THE MAINTENANCE WORK DESCRIBED ABOVE.

**WHAT SHOULD LABORATORY TECHNICIANS BE LIKE?****THEY SHOULD BE:**

1. Conscientious
2. Dependable
3. Alert
4. Neat and clean
5. In good health
6. Accurate

**THEY SHOULD HAVE:**

1. Good vision and hearing
2. Good color vision
3. Good finger coordination
4. Good eye-hand coordination
5. A good sense of smell
6. No allergies

**THEY SHOULD BE ABLE TO:**

1. Concentrate on details for long periods of time
2. Follow written and verbal instructions exactly
3. Do routine work without becoming careless
4. Stand and sit for extended periods of time
5. Communicate clearly and easily

(For a detailed description of your capabilities, see your counselor.)

**WHAT TRAINING WILL PREPARE YOU?****IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are English, science, chemistry, physics, and mathematics.

**AFTER HIGH SCHOOL:**

1. Some companies hire laboratory assistants directly from high school if they have a background in math and science, and train them on the job.
2. One or two years at a college or junior college with a background in science, chemistry, mathematics and engineering courses will help you find a better job. There are no specific programs offered for laboratory technicians in Utah schools.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, laboratory technicians in Utah earned from \$300 - \$375 a month, depending upon their training and experience.
2. Their starting salary was from \$250 - \$300 a month.
3. Some laboratory technicians earned as much as \$400 a month.

WHAT ARE WORKING CONDITIONS LIKE?

1. Laboratories are generally clean, well-lighted, well-ventilated, comfortable places to work.
2. You may be exposed to one or a combination of disagreeable things while conducting a test, such as cold, heat, fumes, noise, and dampness.
3. There is sometimes danger from electricity, acids, radioactive substances, poisonous and flammable substances, and from experiments involving extremely high or low pressures.
4. You may have to gather samples or perform tests out of doors, from time to time.
5. Occasionally, you may have to work evenings or at night.

WHERE IN UTAH WILL YOU WORK?

## TYPE OF INDUSTRY

Private and governmental research laboratories, and the research departments of large industries and manufacturing firms employ the majority of laboratory technicians.

## GEOGRAPHICAL LOCATION

Most of the research and manufacturing establishments in Utah are located in the Ogden - Salt Lake - Provo area.

**Vocational Information For Education and Work**

Laboratory Technician - DOT CODE 029.181  
(July 1967)

IS THERE A NEED FOR LABORATORY TECHNICIANS IN UTAH?

1. In 1965, there were 2,500 laboratory technicians and assistants in Utah. It is predicted, that by 1970, this number will increase to 4,000.
2. The need for laboratory technicians will continue to rise as industries expand and with new technological developments.
3. A large number of laboratory technicians are women.

CAN YOU ADVANCE?



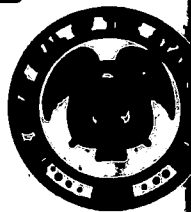
Chemist  
(four years of  
college)

Laboratory Supervisor

Laboratory Technician  
(one or two years of college)

Laboratory Assistant

Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security



YOU ARE A LAUNDRY AND DRY CLEANING  
WORKER

WHAT DO LAUNDRY AND DRY CLEANING WORKERS DO?

THEY WORK IN LAUNDRY OR DRY CLEANING PLANTS PERFORMING VARIOUS JOBS.

1. The marker puts a tag on the laundry and records its weight.
2. The counter sorts incoming laundry into types for washing or special handling.
3. The washing machine operator places bags of laundry in washing machines.
4. The extracter man puts washed laundry in a machine that spins the water out of the clothes.
5. The tumbler man dries the clothes by putting them in a dryer.
6. The mangler operator runs items of laundry through large rollers that press the laundry.
7. The press operator irons clothing by using various types of pressing machines.
8. The spotter dry cleans articles by using various chemicals.
9. A seamstress makes minor repairs or alterations on articles to be laundered or cleaned.



WHAT SHOULD LAUNDRY AND DRY CLEANING WORKERS BE LIKE?

## THEY SHOULD BE:

1. In good health
2. Dependable
3. Agreeable
4. Clean

## THEY SHOULD HAVE:

1. Normal vision and hearing
2. Good eye-hand coordination
3. Average strength

## THEY SHOULD BE ABLE TO:

1. Do strenuous work
2. Tolerate heat
3. Work under pressure
4. Stand for long periods of time
5. Do some tasks over and over in a routine fashion

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are home economics and English.

## AFTER HIGH SCHOOL:

Most employers require a high school diploma but no additional schooling. Training will be received on the job. An interest in the work and a willingness to learn are considered important.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 laundry and dry cleaning workers in Utah earned an average salary of \$1.50 per hour.
2. Their starting salary was \$1.25 per hour.
3. Some laundry and dry cleaning workers made as much as \$2.00 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Very few laundries have air conditioning and the heat may be difficult to tolerate.
2. The work can be very tiring, and physical discomfort is often experienced.
3. Working hazards include danger of burns from hot machinery, and strains from lifting.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Most laundry and dry cleaning workers in Utah are employed in Salt Lake, Utah, Davis, Weber, and Box Elder counties.

**TYPE OF INDUSTRY:**

Laundry and dry cleaning workers are employed by private cleaning establishments, hospitals, colleges, and some governmental agencies.

**Vocational Information For Education and Work**

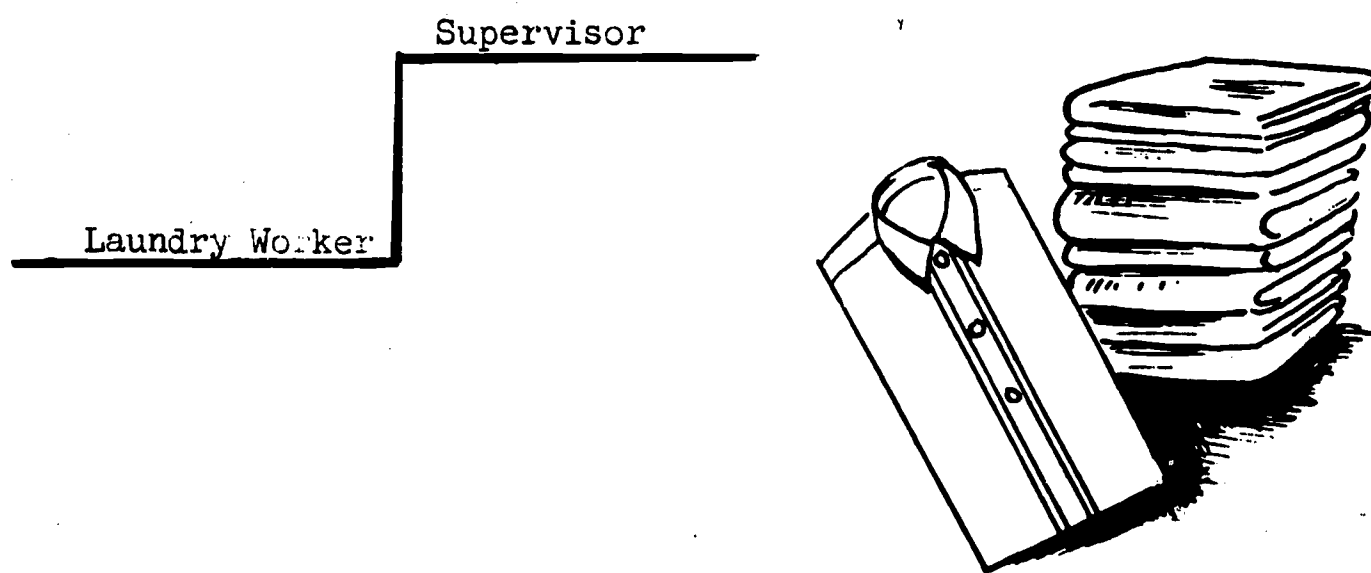
Laundry and Dry Cleaning Worker - DOT Code 362.782  
(July 67)

IS THERE A NEED FOR LAUNDRY AND DRY CLEANING WORKERS?

1. In 1965 there were 1,300 laundry and dry cleaning workers in Utah. It is predicted that by 1970 this number will increase to 1,600.
2. Due to a large turnover of workers, there is usually a high demand for laundry and dry cleaning workers.

CAN YOU ADVANCE?

There are few opportunities for advancement in this occupation.



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



YOU ARE A LIBRARY ASSISTANT

WHAT DO LIBRARY ASSISTANTS DO?

THEY ASSIST LIBRARIANS IN ALL TYPES OF LIBRARY WORK.

THEY:

1. Issue and renew books and other materials
2. Send overdue notices and collect fines
3. Type and file order cards
4. Reshelve books that have been returned
5. Unpack books and periodicals and set them in the proper places

THEY MAY ALSO:

1. Make minor repairs on damaged books using glue and tape
2. Obtain books from other libraries
3. Be in charge of running a smaller library
4. Be assigned to a special job such as ordering, cataloging, working in circulation, or other areas
5. Supervise other workers in the library

WHAT SHOULD LIBRARY ASSISTANTS BE LIKE?

THEY SHOULD BE:

1. Patient
2. Friendly
3. Willing to serve the public
4. Well mannered
5. Dependable

THEY SHOULD HAVE:

1. Concern for detail
2. Some clerical aptitude
3. Normal vision
4. A pleasant personality

THEY SHOULD BE ABLE TO:

1. Take care of many details
2. Get along well with others
3. Keep simple records

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help prepare you for this job are library practice, business courses, some arithmetic, and English.

AFTER HIGH SCHOOL:

1. A high school diploma is required. Additional training may be acquired by taking library science courses in college.
2. Working experience as a library page or aide is helpful in obtaining a job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for library assistants in Utah was \$270 per month.
2. The starting salary was \$240 per month.
3. Some library assistants made as much as \$350 per month.

WHAT ARE WORKING CONDITIONS LIKE?

1. Libraries are usually well lighted, well ventilated buildings
2. The work is usually pleasant and involves contact with the public.
3. There are usually no physical hazards involved in this work.
4. Some library jobs involve standing for most of the day.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Most library assistants work in the larger cities located in Salt Lake, Utah, Davis, Weber, and Box Elder counties.

**TYPE OF INDUSTRY:**

Library assistants in Utah work for public libraries, colleges, schools, hospitals, governmental agencies, and for private industry.

**Vocational Information For Education and Work**

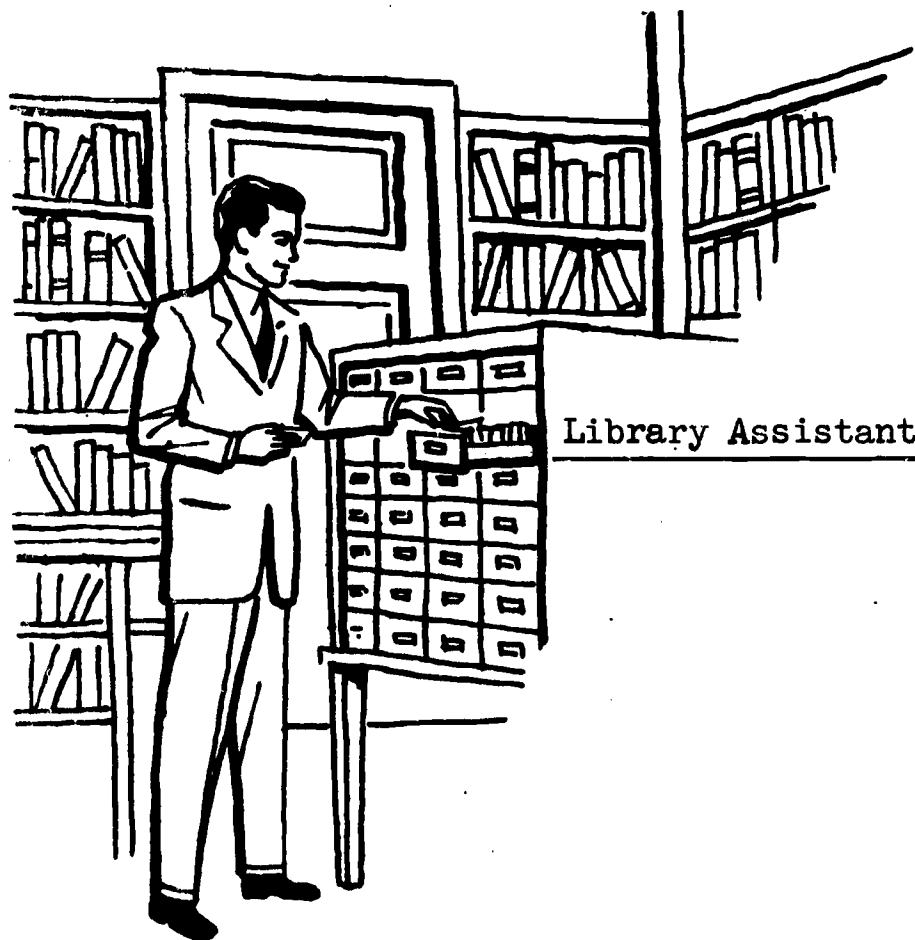
Library Assistant - DOT Code 249.368  
(July 67)

IS THERE A NEED FOR LIBRARY ASSISTANTS?

1. In 1965 there were 230 library assistants in Utah. It is predicted that by 1970 this number will increase to 300.
2. Due to the lack of professional librarians, the need for library assistants will increase in the future.

CAN YOU ADVANCE?

Advancement possibilities are very limited without additional training. Library assistants may be given more responsibility with experience.



Librarian  
(Requires a college degree)

Library Assistant

**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE AN OPTICAL MECHANIC****WHAT DO OPTICAL MECHANICS DO?**

**THEY MAKE EYEGLOSS LENSES AND CONTACT LENSES BY FOLLOWING PRESCRIPTIONS PREPARED BY AN EYE PHYSICIAN OR OPTOMETRIST BY:**

1. Selecting uncut lenses from a stock supply
2. Planning the work to be done on the lenses in order to follow the prescription accurately
3. Grinding and polishing each lens until it meets the correct specifications
4. Cutting and smoothing the edges of the lenses
5. Mounting the lenses in the frames by drilling holes or heating the frames
6. Inspecting the finished lenses using precision instruments and gauges

**THEY MAY ALSO:**

1. Work with contact lenses, using special tools and techniques
2. Work with as many as 200 kinds of optical glass
3. Grind a millionth of an inch off a lense

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WHAT SHOULD OPTICAL MECHANICS BE LIKE?

THEY SHOULD BE:

1. Patient
2. Persistent
3. Proud of their work
4. Precise in their work

THEY SHOULD HAVE:

1. A concern for detail
2. Full use of both hands
3. A keen sense of touch
4. Good eye-hand coordination
5. Good vision

THEY SHOULD BE ABLE TO:

1. Exercise patience and care for long periods of time
2. Work rapidly and accurately
3. Concentrate on details for long periods of time

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL

Subjects that will help you prepare for this job are mathematics, physics, science courses, shop courses, and English.

AFTER HIGH SCHOOL:

Most employers require a high school diploma. Training will be received on the job from an experienced optical mechanic. Several years are usually required to become a skilled optical mechanic. Some workers begin as stock clerks or helpers and are later trained to become optical mechanics.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for optical mechanics in Utah was \$120 per week.
2. Their starting salary was \$70 per week.
3. Some optical mechanics earned as much as \$140 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. The work requires little exertion.
2. The surroundings are usually well-lighted and well-ventilated.
3. Safety regulations are followed so that hazards from working with machines are kept at a minimum.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The majority of Utah's optical mechanics work along the Wasatch Front area, consisting of Box Elder, Davis, Salt Lake, Utah, and Weber counties.

## TYPE OF INDUSTRY:

Most optical mechanics work for companies that are engaged in the manufacture of optical supplies such as eyeglass lenses, contact lenses, binoculars, and camera lenses.

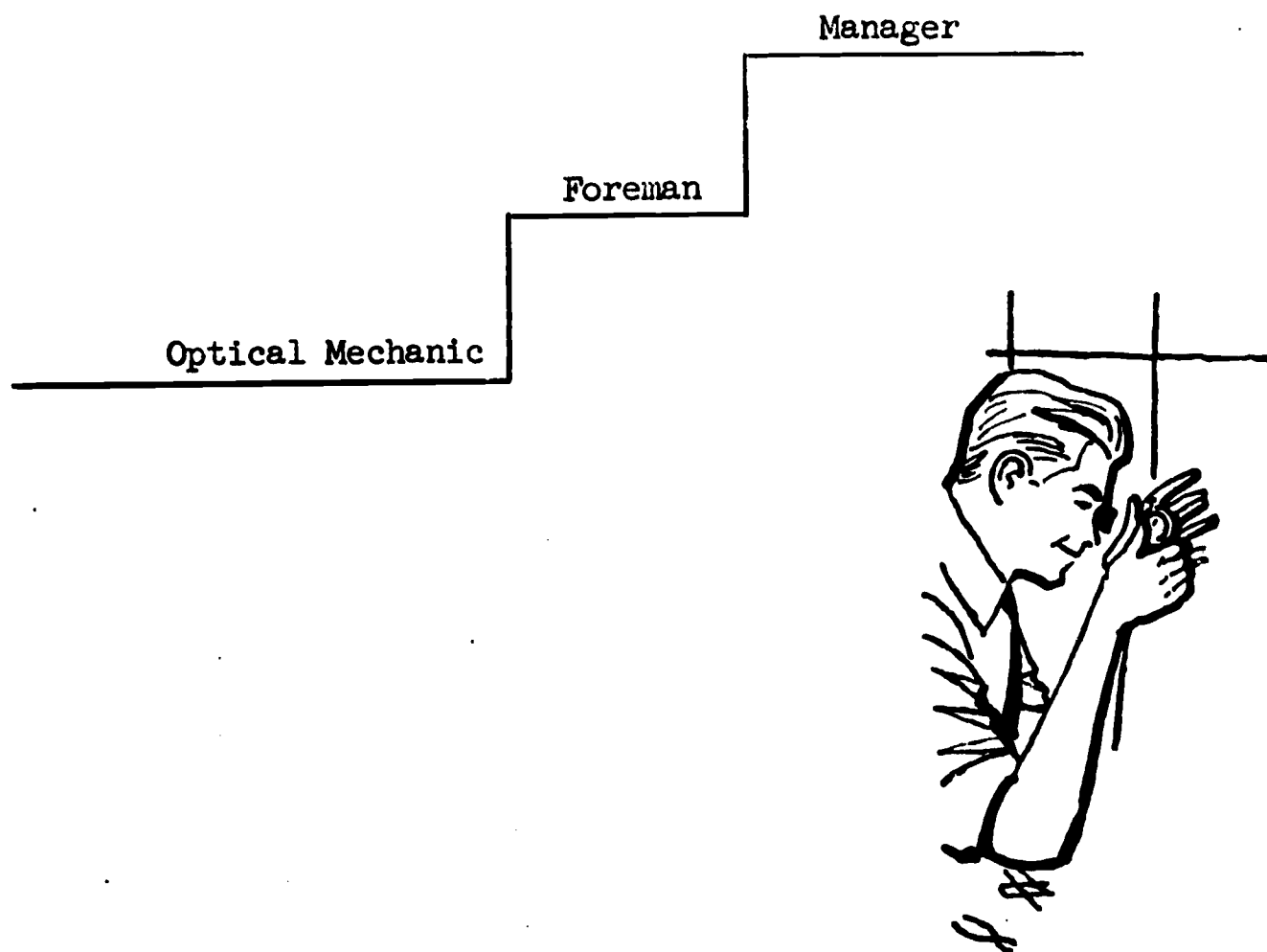
**Vocational Information For Education and Work**

Optical Mechanic - DOT Code 713.381  
(July 67)

IS THERE A NEED FOR OPTICAL MECHANICS?

1. In 1965 there were approximately 90 optical mechanics in Utah. It is predicted that by 1970 this number will increase to 110.
2. Due to the advances in the method of lenses manufacturing, the need for optical mechanics is not expected to rise very rapidly.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



YOU ARE A LICENSED PRACTICAL NURSE

WHAT DO LICENSED PRACTICAL NURSES DO?

THEY HELP DOCTORS AND PROFESSIONAL NURSES TAKE CARE OF PATIENTS WHO ARE PHYSICALLY OR MENTALLY ILL BY:

1. Taking and recording temperatures and blood pressures
2. Cleaning and bandaging wounds and changing the bandage periodically
3. Giving enemas, alcohol rubs, and massages
4. Bathing bed patients and helping them with their personal grooming
5. Giving prescribed medicine to patients and often recording at what time it was taken
6. Giving shots
7. Helping give physical examinations
8. Watching for and reporting changes in the patient's condition
9. Preparing food trays and feeding patients

THEY MAY ALSO:

1. Assist in the delivery, care, and feeding of newborn infants
2. If working in a private home, prepare patient's meals, clean the room, and keep the patient comfortable

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WHAT SHOULD LICENSED PRACTICAL NURSES BE LIKE?

**THEY SHOULD BE:**

1. Patient
2. Tactful
3. Alert
4. Understanding
5. Dependable
6. Clean and neat
7. Cheerful

**THEY SHOULD HAVE:**

1. Stable emotions
2. A desire to serve the ill
3. Good judgment
4. Good health
5. No communicable disease
6. Good vision and hearing
7. Full use of hands and legs

**THEY SHOULD BE ABLE TO:**

1. Follow written and verbal instructions
2. Work well with people
3. Do some strenuous work such as lifting patients
4. Stand on their feet for long periods of time
5. Tolerate bad odors and unpleasant sights

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are health, biology, and physiology.

**AFTER HIGH SCHOOL:**

Most employers prefer to hire high school graduates (two years of high school is the minimum requirement).

You must complete a training course for practical nurses. Utah Technical College, Salt Lake and Provo, and Weber and Carbon Colleges offer courses in practical nursing. These courses last about twelve months.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 licensed practical nurses earned from \$70 to \$80 a week depending upon where they worked, the type of work they did, and their experience.
2. Their starting pay was from \$65 to \$70 a week.
3. A few highly qualified and specialized practical nurses earned \$90 or more.

WHAT ARE WORKING CONDITIONS LIKE?

1. Hospitals and clinics are generally clean, comfortable, well-lighted, well-ventilated places to work. Working conditions for nurses who work in private homes will be as different as each home.
2. You will spend most of your day standing and walking, and will often have to lift patients.
3. There are certain hospital odors you will have to learn to tolerate.
4. Your work will generally be shift work and will include some nights, weekends, and holidays.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

About 75% of Utah's licensed practical nurses work in the five-county area of Box Elder, Davis, Salt Lake, Utah, and Weber counties.

**TYPE OF INDUSTRY:**

Over half of Utah's licensed practical nurses work in hospitals, clinics or doctors' offices. About one-third work in private homes and rest homes. Public health agencies and industrial establishments employ the remainder.

**Vocational Information For Education and Work**

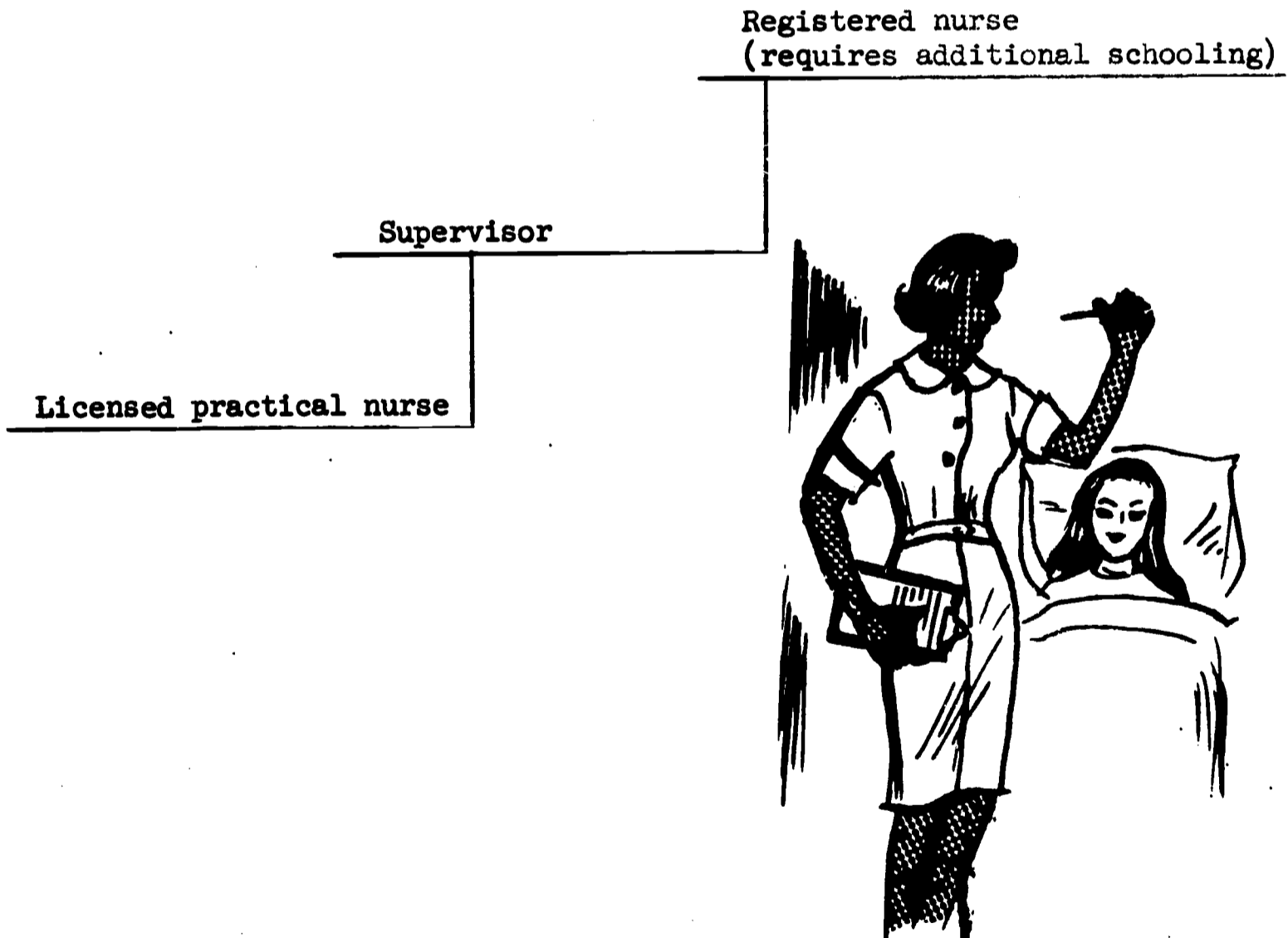
Licensed Practical Nurse - DOT Code 079.378  
(July 67)

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IS THERE A NEED FOR LICENSED PRACTICAL NURSES IN UTAH?

1. In 1965 there were 269 licensed practical nurses in Utah. It is predicted that by 1970 this number will increase to 432.
2. The need for licensed practical nurses will continue to increase rapidly as they are given more and more of the registered nurse's duties, and as more and more people are able to afford hospital care.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A LINEMAN****WHAT DO LINEMEN DO?**

**THEY ARE RESPONSIBLE FOR THE MAINTENANCE AND CONSTRUCTION OF LINES THAT CARRY ELECTRIC POWER OR LINES THAT ARE USED IN COMMUNICATIONS.**

**THEY:**

1. Use power equipment to set up poles and put wires on the poles
2. Put the proper equipment on poles or towers on which they string the wire
3. Trim trees that interfere with the wires
4. Inspect lines to prevent breakdowns
5. Repair faulty conditions that have been reported

**THEY MAY ALSO:**

1. Work on power lines that carry up to 220,000 volts of electricity
2. Work from a platform at the end of a truck boom
3. Patrol remote areas using trucks, helicopters, skis, snowshoes, and horses
4. Work as cable splicers by attaching different wires together in a skillful manner

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WHAT SHOULD LINEMEN BE LIKE?

**THEY SHOULD BE:**

1. In good health
2. Capable of using both hands normally
3. Coordinated
4. Dependable

**THEY SHOULD HAVE:**

1. Good vision and hearing
2. Good eye-hand coordination
3. A good sense of balance
4. Average strength
5. Good judgment

**THEY SHOULD BE ABLE TO:**

1. Work at heights
2. Do some strenuous work
3. Take care of many details

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are science, arithmetic, physics, shop courses, and English.

**AFTER HIGH SCHOOL:**

1. High school graduation is essential.
2. Many linemen train as apprentices. As an apprentice you will receive on-the-job training and classroom instruction.
3. Other workers are hired as helpers and learn through experience.

### HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 linemen in Utah made an average salary of \$3.25 per hour.
2. Their starting salary was \$2.10 per hour.
3. Some linemen made as much as \$6.00 per hour.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Nearly all of the work is done out-of-doors.
2. The work may be strenuous, requiring physical strength and agility.
3. During the winter months and during periods of bad weather, linemen may work overtime in repairing lines.
4. The principal hazards of this occupation are falls and electrical shock.

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION:

The majority of the linemen in Utah work in Salt Lake, Utah, Davis, Weber, and Box Elder counties, but linemen work throughout the state.

#### TYPE OF INDUSTRY:

Most linemen are employed by telephone companies and power and light companies. Others work for governmental agencies, telegraph companies, and electrical contractors.

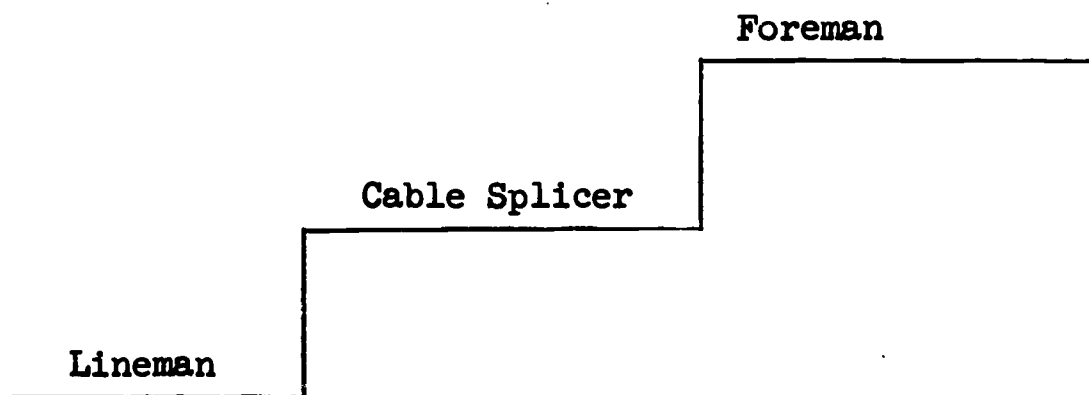
## Vocational Information For Education and Work

Lineman - Dot Code 821.381  
(July 67)

IS THERE A NEED FOR LINEMEN?

1. In 1965 there were 1,000 linemen in Utah. It is predicted that by 1970 this number will increase to 1,300.
2. The need for linemen is expected to continue to increase due to the trend toward placing more systems underground.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## YOU ARE A LINOTYPE OPERATOR

### WHAT DO LINOTYPE OPERATORS DO?

THEY OPERATE TYPESETTING MACHINES TO SET WRITTEN MATERIAL IN TYPE FOR PRINTING BY:

1. Clipping the written material to the machine's copy board where it can be easily read
2. Turning a handwheel on the machine to select various sizes and styles of letters
3. Selecting letters and characters from a keyboard of 90 keys
4. Pressing down the correct keys as though they were typing to assemble metal letters into lines of words
5. Pulling a hand lever after each line is completed to make an imprint of the letters on a strip of metal called a "slug" which is then automatically put into a tray and the metal letters returned back in place
6. Continuing this process for each line of the material, then taking the completed tray of slugs to the composing room to be proofread
7. Correcting any mistakes found by the proofreader

THEY MAY ALSO:

1. Operate machines that punch holes in strips of paper which are later used to operate automatic type setting machines
2. Operate machines that use a photographic process to print the material on film paper which is then reproduced
3. Set type by hand, letter by letter, in a "composing stick" which holds the type in place

WHAT SHOULD LINOTYPE OPERATORS BE LIKE?

THEY SHOULD BE:	THEY SHOULD HAVE:	THEY SHOULD BE ABLE TO:
1. Artistic	1. An eye for design	1. Use good judgment in spacing words and letters
2. Proud of their work	2. Good finger coordination	2. Follow written and verbal instructions accurately
3. Patient	3. Good eyesight	3. Use basic arithmetic
4. Accurate	4. Good judgment of size	4. Correct errors in spelling, grammar and punctuation
5. In good physical condition (Some handicaps, such as deafness, or incomplete use of legs, will not prevent employment)	5. Mechanical ability	5. Notice mistakes in writing and printing
	6. Typing ability	6. Work carefully under pressure
	7. A good knowledge of English	7. Do detailed work

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are typing, photography, English (spelling), art, graphic arts, and mathematics.

**AFTER HIGH SCHOOL:**

1. The best way to become a fully qualified linotype operator is to train for six years as an apprentice. During this time, you will receive supervised on-the-job training and classroom instruction.
2. Some workers learn the trade informally as helpers. They do not advance as fast as the apprentice.
3. Utah Technical College, Salt Lake, offers a 12-month course in the skills of printing. Graduates of this course are in a good position to find work.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average pay for linotype operators was \$3.00 to \$3.75 an hour.
2. In some small print shops, linotype operators earned less than \$3.00 an hour.
3. Some linotype operators working for large newspaper companies earned more than \$3.75 an hour.
4. The starting pay for apprentices is \$1.50 to \$2.00 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions vary from place to place. Newer establishments are generally well-lighted, clean, and air conditioned.
2. Linotype operators spend most of their day sitting at their machines.
3. You may have to do some lifting of heavy page forms.
4. Heat, noise, and vibrations are made by metal typesetting machines.
5. There is some slight danger of burns from hot metal and injuries to hands and fingers from moving machine parts.
6. Depending upon the company for which you work, you may have to work late shifts or nights.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Practically all of Utah's linotype operators work in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake, and Utah counties.

**TYPE OF INDUSTRY:**

Newspaper companies, commercial printing shops, book and magazine printing companies employ the majority of linotype operators.

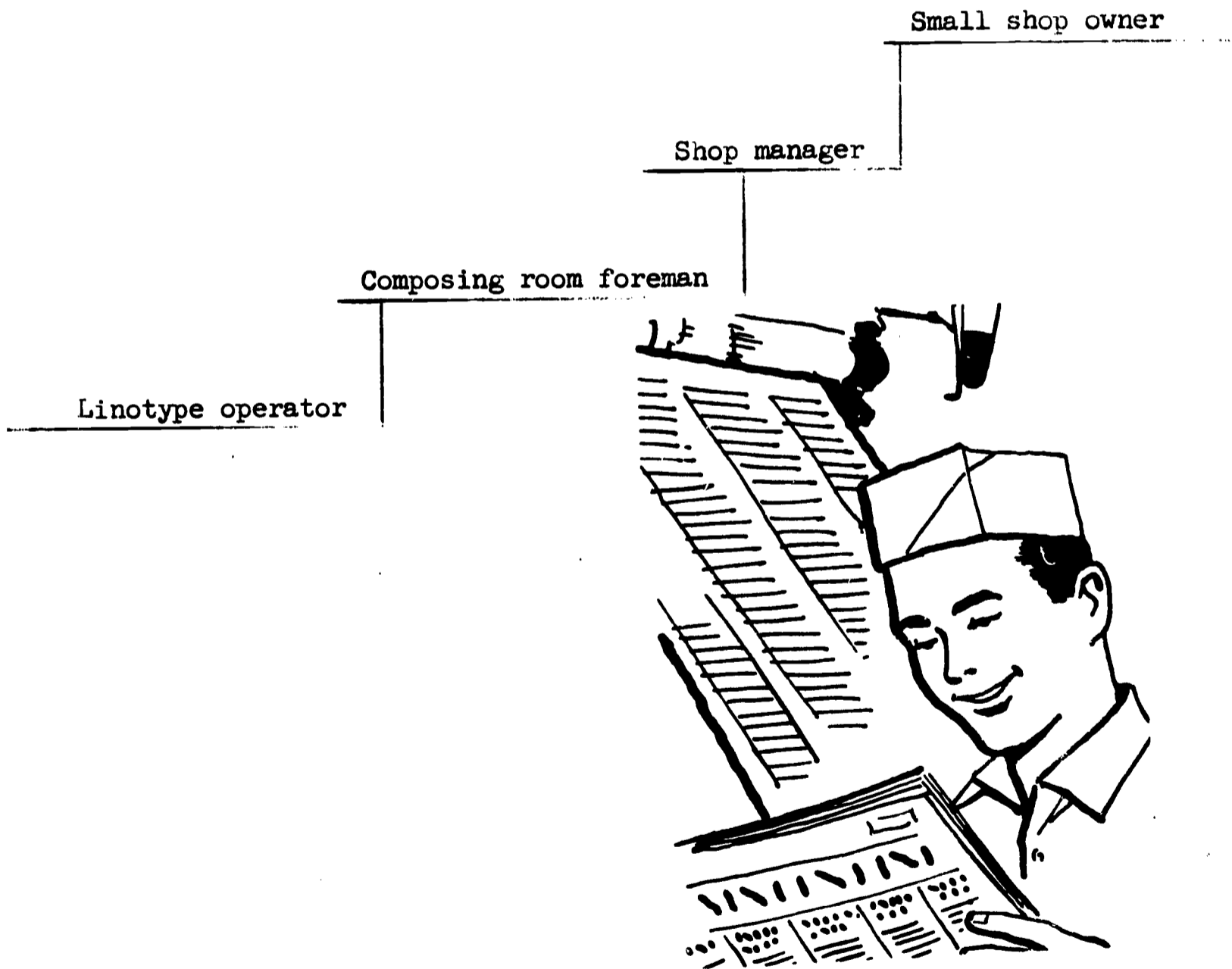
**Vocational Information For Education and Work**

Linotype Operator--Dot Code 650.582  
(July 67)

IS THERE A NEED FOR LINOTYPE OPERATORS IN UTAH?

1. In 1965, there were 45 linotype operators in Utah. It is predicted that by 1970 this number will increase to 60.
2. The need for linotype operators will increase as typesetting equipment becomes more widely used.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



YOU ARE A LOCOMOTIVE FIREMAN  
YOU ARE A LOCOMOTIVE ENGINEER

67

WHAT DO LOCOMOTIVE FIREMEN DO?

THEY ASSIST THE ENGINEER ON FREIGHT AND PASSENGER TRAINS AND IN RAILROAD YARDS.

THEY:

1. Check the locomotive before each run to make sure that it is equipped with fuel, sand, water and other supplies
2. Inspect the engine to see that it is in proper working order and start it to warm it before a run
3. Observe the oil, temperature and pressure gauges on the dashboard to see if the engine is running smoothly
4. Watch the track to see that it is clear of large obstacles
5. Inspect the train from their window as it rounds the curves to look for smoke, sparks, fire, or other signs of defective equipment.
6. Observe wayside signal lights and signals from workers in the rear of the train and relay the information to the engineer
7. Learn to drive the locomotive by watching the engineer operate the controls. They may be called upon to relieve the engineer for brief periods and must always be ready to take over if anything should happen to him.

WHAT DO LOCOMOTIVE ENGINEERS DO?

THEY OPERATE LOCOMOTIVE ENGINES ON A RAILROAD AND ARE RESPONSIBLE FOR RUNNING THE LOCOMOTIVE SAFELY AND EFFICIENTLY.

THEY:

1. Must begin as a locomotive fireman and can advance only after a certain amount of experience
2. Continue to do many of the same things a fireman does, instructing him, and supervising his activities
3. May lubricate moving parts in the engine
4. Operate various controls to drive the locomotive, following written instructions for each run as well as instructions received from signal lights and radio telephones, to keep the train on the correct track and on schedule.

The YARD ENGINEER AND FIREMAN operate locomotives or switch engines used to move freight and passenger cars when trains are being made up before a run, or broken up after a run or when cars are being moved for loading.



WHAT SHOULD LOCOMOTIVE FIREMEN AND ENGINEERS BE LIKE?

## THEY SHOULD BE:

1. Alert
2. In good health
3. 21 years of age

## THEY SHOULD HAVE:

1. Good eyesight
2. Good hearing
3. Good color vision

## THEY SHOULD BE ABLE TO:

1. Pass a physical examination from time to time
2. Do some mechanical repair work on engines

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are shop and auto mechanics.

## AFTER HIGH SCHOOL:

1. A high school diploma is required. Most railroads won't hire you until you are over 20 years of age.
2. You will receive your training on the job under the supervision of an engineer or another fireman. Training lasts from one to four weeks after which you must pass an examination on railroad rules and regulations to be eligible for call as a fireman.
3. Openings for engineers are filled from firemen on a seniority basis. They must pass an examination on all areas of train operation to qualify.

HOW MUCH MONEY WILL YOU MAKE?

Your salary will depend on how long you have been on the job. Younger firemen and engineers work fewer hours a month than those who are more experienced. They do not generally have regular assignments but are called to work when needed. After several years' experience, they may be given a regular assignment.

1. In 1966, the average salary for yard firemen was \$625 a month.
2. In 1966, the average salary for freight service firemen was \$750 per month.
3. In 1966, the average salary for passenger train firemen was \$850 per month.
4. In 1966, the average salary for yard engineers was \$800 per month.
5. In 1966, the average salary for freight service engineers was \$945 per month.
6. In 1966, the average salary for passenger train engineers was \$985 per month.

WHAT ARE WORKING CONDITIONS LIKE?

1. You will often work nights, weekends and holidays.
2. Your hours will be irregular and the amount of work will vary with different times of the year.
3. You must often stay over, away from home, at the end of a long run before making the return run.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The majority of locomotive firemen and engineers are stationed in the Provo - Salt Lake - Ogden area.

## TYPE OF INDUSTRY:

The railroad industry dealing in freight and passenger transportation hires the majority of firemen and engineers. Large industries and mining companies such as Kennecott Copper and Geneva Steel also employ yard engineers and firemen.

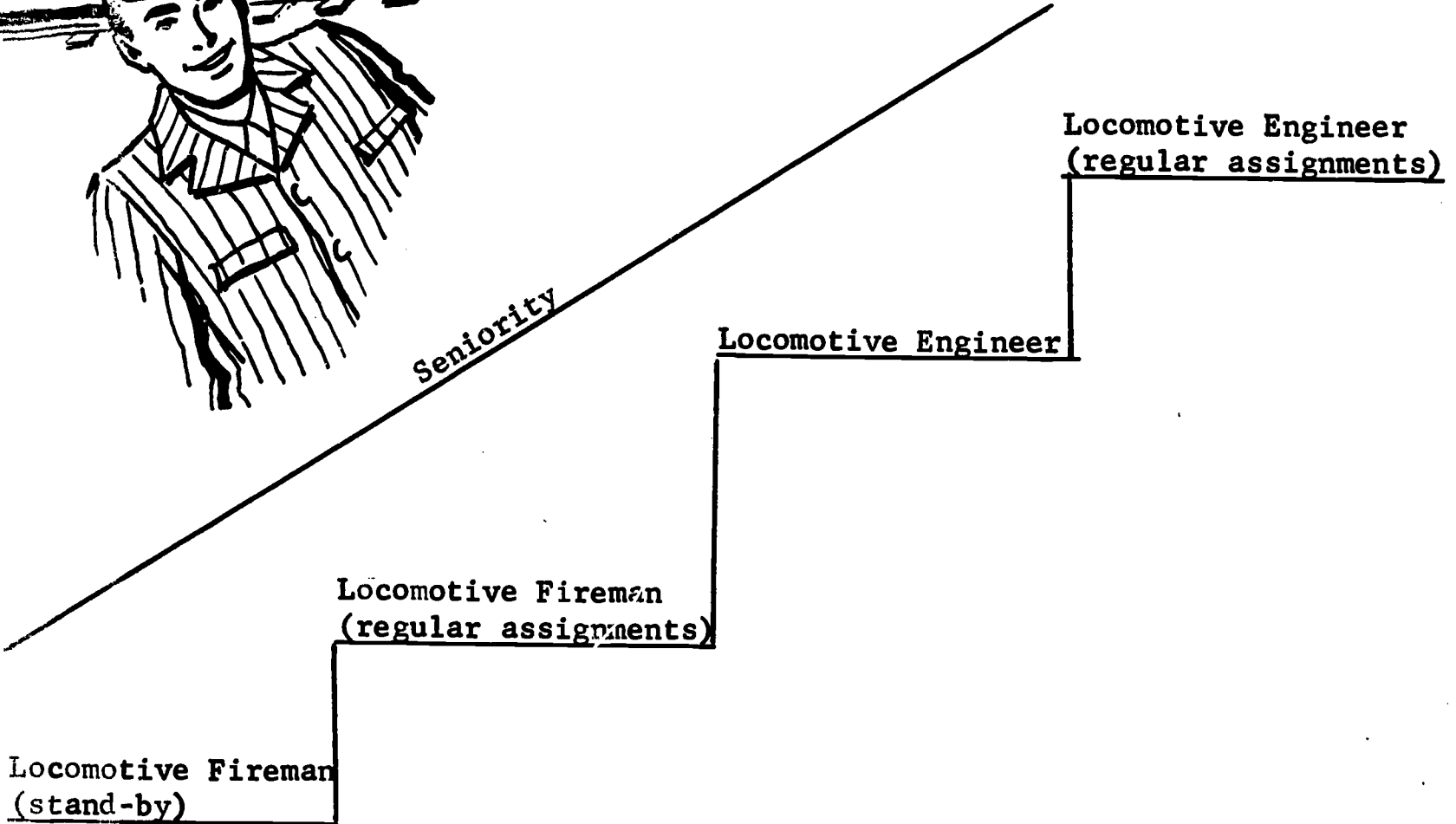
Vocational Information For Education and Work

LOCOMOTIVE FIREMAN, LOCOMOTIVE ENGINEER - DOT Code 910.383  
(July 1967)

IS THERE A NEED FOR LOCOMOTIVE FIREMEN AND ENGINEERS IN UTAH?

- 1. In 1965, there were 406 locomotive firemen in Utah. It is predicted that by 1970 this number will decrease to 359.
- 2. In 1965, there were 636 locomotive engineers in Utah. It is predicted that by 197- this number will decrease to 582.
- 3. The expected decrease in the number of firemen and engineers is due to the decline in the railroad business and to new changes in equipment and operating methods.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
 Utah State Board of Education  
 Utah State Department of Employment Security**



## YOU ARE A MACHINIST

### WHAT DO MACHINISTS DO?

THEY MAKE METAL PARTS WITH MACHINE TOOLS BY:

1. Setting up and operating basic metal working machine tools including engine lathes, milling machines, shapers, and grinding machines
2. Using hand tools and measuring instruments such as files, chisels, scrapers, and micrometers
3. Planning their work by using blueprints, mathematics, charts and tables
4. Performing operations requiring extreme care and accuracy

TYPICAL JOB ASSIGNMENTS INCLUDE:

1. Enlarging a tapered hole with a boring mill
2. Grinding crankshafts for diesel engines
3. Using an engine lathe to make replacement parts for cranes and conveyors
4. Drilling holes in odd-shaped aluminum forgings with a radial drill press so that reinforcing steel rods can be inserted to strengthen the aluminum

WHAT SHOULD MACHINISTS BE LIKE?

THEY SHOULD BE:

1. Mechanically inclined
2. Precise in their work
3. Skillful in the use of their hands
4. Dependable

THEY SHOULD HAVE:

1. Good eye-hand coordination
2. A concern for detail
3. Normal vision
4. Ability to use tools

THEY SHOULD BE ABLE TO:

1. Stand for long periods of time
2. Do extremely accurate work
3. Concentrate on details for long periods of time
4. Read blueprints

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, shop courses, mechanical drawing, and English.

AFTER HIGH SCHOOL:

Most employers require a high school diploma. The best way to train for this job is as an apprentice. As an apprentice you will receive on-the-job training. You will also receive related classroom instruction. After four years as an apprentice, you may become a fully qualified worker called a journeyman.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 machinists in Utah made an average wage of \$3.20 per hour.
2. The starting salary for apprentices was \$1.60 per hour.
3. Some machinists earned as much as \$4.50 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Most machine shops are relatively clean and well-lighted.
2. The work is usually not strenuous.
3. Working around machines can be dangerous unless safety regulations are strictly followed.
4. Employees are usually required to wear goggles to prevent injuries from flying metal chips.

WHERE IN UTAH WILL YOU WORK?

GEOGRAPHICAL LOCATION:

The majority of machinists work in the five-county Wasatch Front area surrounding Salt Lake City, Ogden, and Provo.

TYPE OF INDUSTRY:

The majority of Utah's machinists are employed in the metal-working industries involved in manufacturing. Custom machine shops are a major employer of machinists.

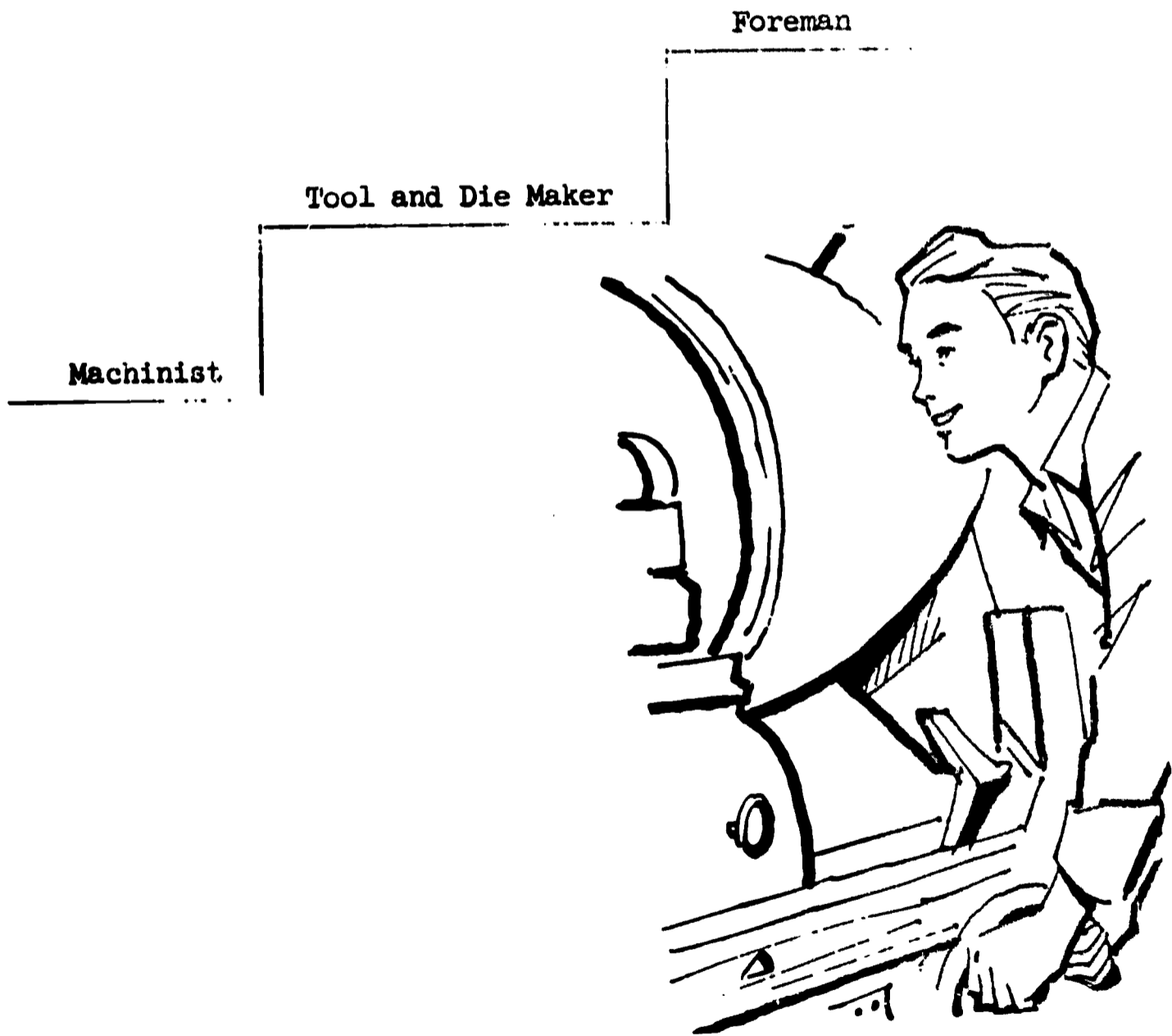
Vocational Information For Education and Work

Machinist - DOT Code 600.280  
(July 67)

IS THERE A NEED FOR MACHINISTS IN UTAH?

- 1. In 1965 there were 2,130 machinists in Utah. It is predicted that by 1970 this number will increase to 2,600.
- 2. There is a constant demand for machinists with a high degree of skill.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
 Utah State Board of Education  
 Utah State Department of Employment Security**



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**YOU ARE A MAIL CARRIER****WHAT DO MAIL CARRIERS DO?**

**THEY ARE RESPONSIBLE FOR DELIVERING AND COLLECTING MAIL IN A SPECIFIC GEOGRAPHICAL AREA.**

**THEY:**

1. Arrange mail in the order in which it will be delivered
2. Re-address any mail to be forwarded
3. Assemble the mail into bundles in the order of delivery
4. Place the bundles in trucks and truck drivers deliver them to storage boxes at intervals along the route.
5. Deliver a bundle of mail on the first section of the route
6. Pick up another bundle of mail when they reach a storage box

**THEY MAY ALSO:**

1. Use a light, three wheeled motor vehicle called a mailster
2. Cover the route a number of times each day in downtown business districts
3. Drive a truck to deliver packages and collect mail from street letter boxes
4. Collect money owed on postage, and sign receipts

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WHAT SHOULD MAIL CARRIERS BE LIKE?

## THEY SHOULD BE:

1. In good health
2. Friendly
3. Well mannered
4. Willing to do hard physical work
5. Honest

## THEY SHOULD HAVE:

1. A well-groomed appearance
2. A liking for people
3. Good vision
4. Above average stamina
5. A good memory

## THEY SHOULD BE ABLE TO:

1. Walk for long periods of time
2. Work hard in hot or cold weather
3. Carry loads weighing 35 pounds
4. Work alone

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are speed reading, social science, arithmetic, and English.

## AFTER HIGH SCHOOL:

1. To become a mail carrier you must pass a civil service test, which involves arithmetic, spelling, vocabulary, and reading.
2. A rigorous physical examination is required.
3. Applicants are selected on the basis of their test score and background.
4. A high school diploma is not essential, but will help in obtaining a job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for mail carriers in Utah was \$119 per week.
2. Their starting salary was \$103 per week.
3. Some mail carriers made as much as \$140 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Nearly all of the work is done out of doors in all kinds of weather.
2. Most carriers do a great deal of walking while carrying a mail bag.
3. Mail carriers usually work without much supervision.
4. Most carriers start as substitutes, and only work part-time.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

The majority of the mail carriers in Utah work in and around the larger cities such as Salt Lake, Ogden, and Provo.

**TYPE OF INDUSTRY:**

Mail carriers work for the federal government.

**Vocational Information For Education and Work**

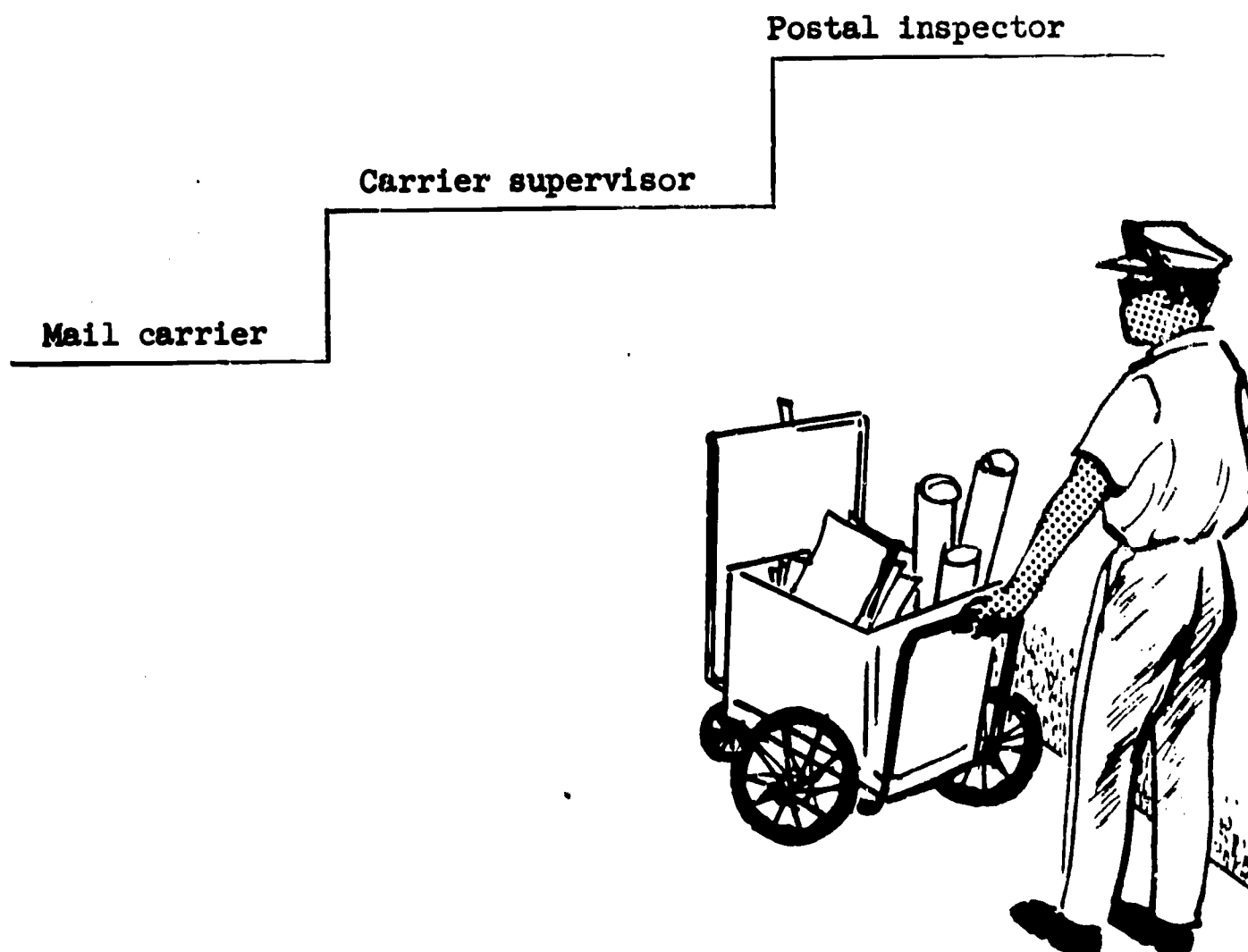
Mail Carrier - DOT Code 233.388  
(July 67)

IS THERE A NEED FOR MAIL CARRIERS?

1. In 1965 there were 1,080 mail carriers in Utah. It is predicted that by 1970 this number will increase to 1,200.
2. The need for mail carriers will increase as the population does.

CAN YOU ADVANCE?

Advancement opportunities are limited in this occupation.



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



YOU ARE A MAINTENANCE MECHANIC

WHAT DO MAINTENANCE MECHANICS DO?

THEY REPAIR MACHINES USED IN INDUSTRY BY:

1. Finding the cause of trouble in broken machinery and making the necessary repairs
2. Taking the machine apart, when necessary, to repair or replace defective parts
3. Putting the machine back together and making any adjustments necessary to make it run smoothly

THEY SERVICE MACHINES USED IN INDUSTRY TO KEEP THEM RUNNING SMOOTHLY BY:

1. Inspecting, oiling, greasing, and cleaning machines regularly to prevent them from breaking down
2. Keeping maintenance records of the machines they service.

THEY MAY ALSO:

1. Follow blueprints and written instructions while repairing or cleaning a machine
2. Build, redesign, and install new machinery and rebuild and rearrange old machinery
3. Specialize in the type of machines they service or in the service they perform (lubricating, cleaning, repairing, rebuilding, etc.)

WHAT SHOULD MAINTENANCE MECHANICS BE LIKE?

THEY SHOULD BE:

1. Agile
2. In good physical condition
3. Mechanically inclined
4. Energetic

THEY SHOULD HAVE:

1. Good finger and hand coordination
2. Above average strength
3. An eye for judging size and distance
4. An ability to work with tools and machinery

THEY SHOULD BE ABLE TO:

1. Use mathematics to solve problems
2. Lift, stoop, crawl under and climb over machinery
3. Handle and lift heavy equipment
4. Read blueprints
5. Work in awkward or cramped positions for long periods of time
6. Find mechanical problems quickly

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help prepare you for this job are machine shop practice, welding, mechanical drawing, shop, and mathematics.

AFTER HIGH SCHOOL:

1. Most employers prefer to hire high school graduates and train them on the job. It takes from three to four years of training to learn the necessary skills of this job.
2. Additional schooling in related subjects such as welding, blueprint reading, machine shop technology, etc., at one of Utah's trade schools will help you find a better job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, maintenance mechanics earned from \$3.00 to \$3.50 an hour.
2. Their beginning salary was from \$2.00 to \$3.00 an hour.
3. Some maintenance mechanics earned as much as \$4.00 an hour, depending upon their skill and experience.

WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions will vary with the industry. Some establishments are clean, well-lighted, and well-ventilated, while others may be dirty, dingy, stuffy, and partly exposed to the weather.
2. Some of your work will be done in stooped or cramped positions close to the floor or on top of ladders.
3. Much of your work is done on dirty, greasy machines and you will have to tolerate having dirt and grease on your hands and clothes.
4. There is danger of common shop injuries such as cuts and bruises. However, required safety equipment prevents many of these accidents.
5. There is a lot of noise from surrounding machines.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Most of Utah's maintenance mechanics are employed in manufacturing industries which are located in the Salt Lake-Ogden-Provo area. However, there will be need of a maintenance mechanic wherever there is a factory with a lot of machinery.

**TYPE OF INDUSTRY:**

Large industrial companies and factories that use a lot of machinery and equipment to make their products such as Geneva Steel, Kennecott Copper, and others employ the majority of maintenance mechanics.

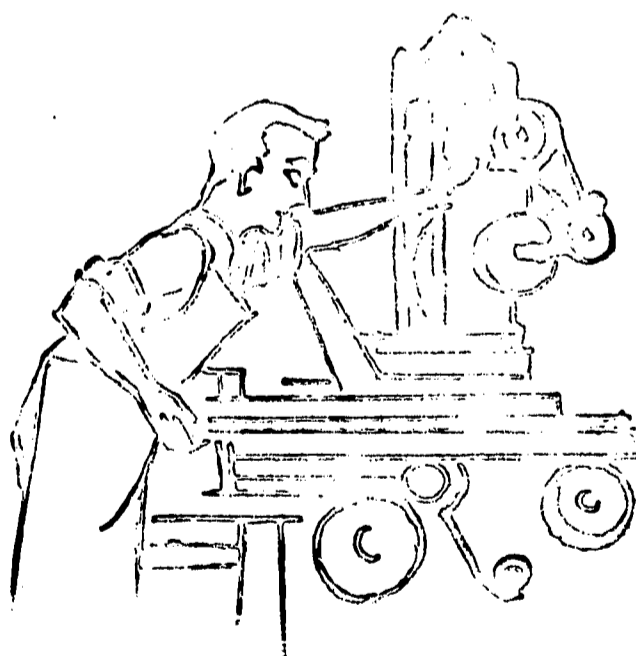
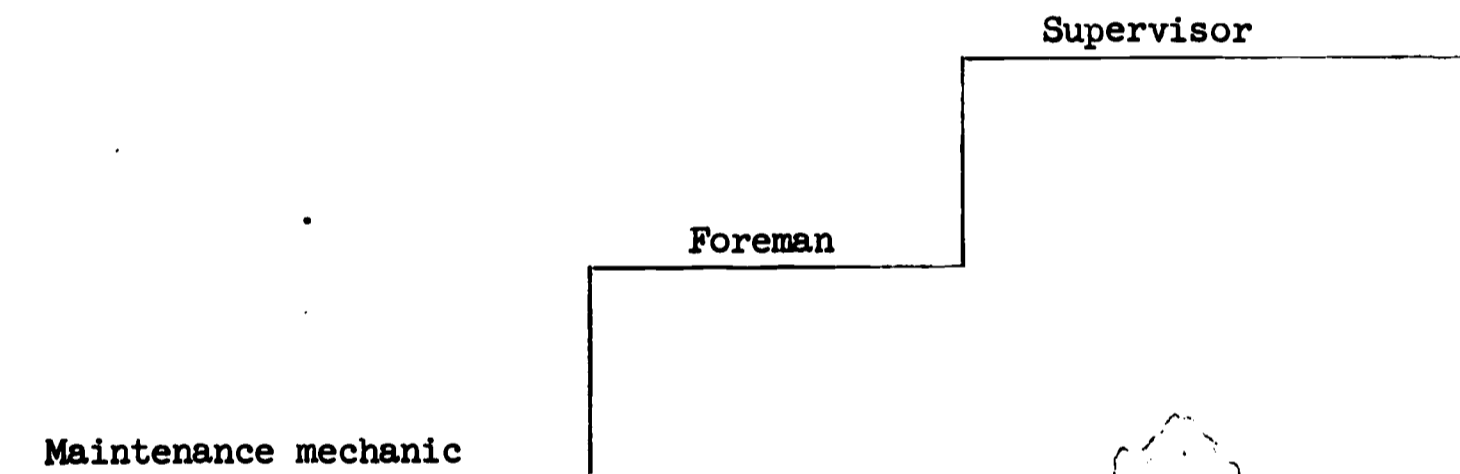
**Vocational Information For Education and Work**

Maintenance Mechanics - DOT Code 638.281  
(July 67)

IS THERE A NEED FOR MAINTENANCE MECHANICS?

1. In 1965, there were 2,531 maintenance mechanics in Utah. It is predicted that by 1970 this number will increase to 2,946.
2. The need for maintenance mechanics will continue to rise due to the number of companies that are using more and more machinery to do their work.

CAN YOU ADVANCE?



Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security



## YOU ARE A MEATCUTTER

### WHAT DO MEATCUTTERS DO?

THEY PREPARE MEAT FOR WHOLESALE OR RETAIL TRADE BY:

1. Reducing whole carcasses of beef, veal, lamb or pork to halves and quarters by using a band saw
2. Reducing the halves and quarters into basic meat cuts such as chucks, rounds, loins, plates, and ribs
3. Using saws and choppers to separate the more expensive cuts from the rest of the quarter
4. Using boning knives to remove bones from the meat
5. Cut away the trimming to be used for hamburger

THEY MAY ALSO:

1. Use over 300 various cuts of meat
2. Display meat in a case
3. Wrap and sell meat
4. Do clean up work in the meat department

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WHAT SHOULD MEAT CUTTERS BE LIKE?

THEY SHOULD BE:

1. Willing to learn
2. Neat
3. Clean
4. Free from communicable diseases

THEY SHOULD HAVE:

1. A sense of responsibility
2. Good vision
3. Good eye-hand coordination
4. Good finger coordination
5. A pleasant personality

THEY SHOULD BE ABLE TO:

1. Stand for long periods of time
2. Do some heavy lifting
3. Do some strenuous work
4. Do neat work

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help prepare you for this job are health, arithmetic, shop courses, and English.

AFTER HIGH SCHOOL:

1. Graduation from high school is usually a requirement.
2. The best way to train for this job is as an apprentice. As an apprentice you will receive on-the-job training and related classroom instruction. After two years as an apprentice you may become a fully qualified worker called a journeyman.
3. Some employees gain their skills by working in a grocery store as an assistant, and observing the meat cutter at work.

### HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for meat cutters in Utah was \$122 per week.
2. Their starting salary was \$80 per week.
3. Some meat cutters made as much as \$150 per week.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Meat cutters are subject to sharp temperature changes due to working in the cooler and then at the counter.
2. The job requires working with animal carcasses.
3. Injuries to fingers and hands can result from careless use of tools and equipment.
4. The job may involve dealing with the public.

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION:

Most meat cutters work in the larger cities located in Salt Lake, Utah, Davis, Weber, and Box Elder Counties.

#### TYPE OF INDUSTRY:

Most cutters are employed by small grocery stores, supermarkets, slaughter houses, wholesale meat plants, hospitals, hotels, and governmental agencies.

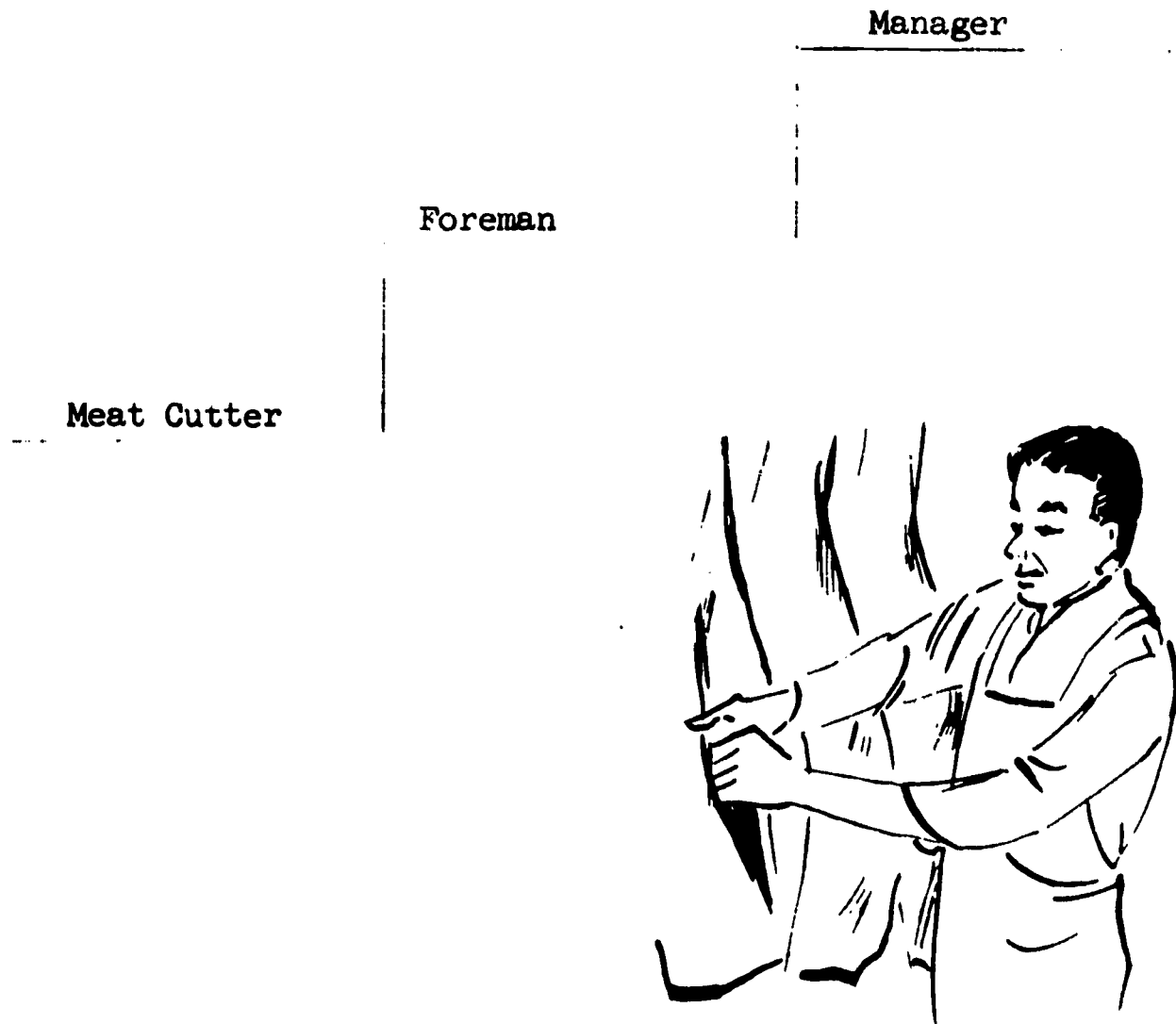
## Vocational Information For Education and Work

Meatcutter - Dot Code 316.884  
(July 67)

IS THERE A NEED FOR MEAT CUTTERS IN UTAH?

In 1965 there were 1,050 meat cutters in Utah. It is predicted that by 1970 this number will increase to 1,430.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A MEDICAL LABORATORY ASSISTANT**

**(MEDICAL TECHNICIAN)**

**WHAT DO MEDICAL LABORATORY ASSISTANTS DO?**

**THEY PERFORM ROUTINE LABORATORY TESTS UNDER THE SUPERVISION OF A MEDICAL TECHNOLOGIST.**

**THEY:**

1. Prepare stained slides of body tissues for the pathologist to look at
2. Take blood samples and make tests to determine the type and cell count
3. Collect specimens from patients and make urinalyses
4. Examine body fluids using a microscope to look for different kinds of bacteria
5. Prepare vaccines and other solutions.

**THEY MAINTAIN THE LABORATORY.**

**THEY ALSO:**

1. Clean and sterilize equipment
2. Make sure the necessary supply of chemicals and equipment is on hand
3. Keep records of tests made
4. May feed and take care of experimental animals.

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WHAT SHOULD MEDICAL LABORATORY ASSISTANTS BE LIKE?

THEY SHOULD BE:

1. Conscientious
2. Dependable
3. Accurate
4. Neat and clean
5. Agreeable

THEY SHOULD HAVE:

1. Good vision and hearing
2. Good color vision
3. Good finger coordination
4. Good eye-hand coordination
5. A desire to help people
6. No contagious disease

THEY SHOULD BE ABLE TO:

1. Concentrate on details for long periods of time
2. Work under pressure
3. Use their eyes for close work including long periods at a microscope
4. Do routine work without becoming careless - a patient's life may depend on their tests
5. Stand and walk much of the time
6. Follow written and verbal instructions exactly.

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help prepare you for this job are chemistry, biology, physiology, and health education.

AFTER HIGH SCHOOL:

1. You must be a high school graduate. It is possible to find a job with no additional schooling and receive on-the-job training.
2. Most employers prefer someone who has had one to two years of schooling at a college or junior college. Courses in microbiology, bacteriology, and clinical chemistry, as well as those mentioned above will be most helpful. There are no specific programs offered in Utah schools for medical laboratory assistants.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, medical laboratory assistants in Utah earned from \$300 - \$360 a month, depending upon their training and experience.
2. Their starting salary was approximately \$275 a month.
3. Some assistants earned as much as \$375 a month.

WHAT ARE WORKING CONDITIONS LIKE?

1. Hospital and clinical laboratories are clean, well-lighted, well-ventilated places to work.
2. There are often unpleasant odors that you must tolerate.
3. You may receive small cuts and burns from laboratory equipment.
4. There is danger of infection from laboratory specimens if you don't take the necessary precautions.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The majority of Utah's medical laboratory assistants are employed in the five county area of Box Elder, Davis, Salt Lake, Utah and Weber. However, you may find work wherever there is a large hospital or clinic.

## TYPE OF PLACE:

Most medical laboratory assistants work in hospital laboratories. Some are employed by clinics, private laboratories and doctors' offices.

Vocational Information For Education and Work

Medical Laboratory Assistant - DOT CODE 078.381  
(July 1967)

IS THERE A NEED FOR MEDICAL LABORATORY ASSISTANTS IN UTAH?

1. In 1965, there were 635 medical laboratory assistants in Utah. It is predicted that by 1970, this number will increase to 962.
2. The need for medical laboratory assistants will continue to rise due to the increase in hospital facilities.
3. There are more women in this field than men. However, the number of male assistants is increasing.

CAN YOU ADVANCE?

Advancement is only obtained by receiving additional schooling.



Medical laboratory assistant

Medical Technologist

(Three years of college plus a one-year training program, or four years of college).

**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A METER READER****WHAT DO METER READERS DO?**

**THEY READ METERS WHICH MEASURE THE AMOUNT OF GAS, ELECTRICITY, OR WATER USED BY CUSTOMERS BY:**

1. Going from house to house following a planned route
2. Reading gas, electric, or water meters and recording the figures on the customer's record card which they carry in a loose-leaf
3. Figuring out how much each customer has used by subtracting the previous reading from the present one
4. Looking for broken meters and meters that are not working properly to report to the meter repairman
5. Reporting to the district supervisor any meters that may have been tampered with
6. Driving from place to place in the country and in industrial areas where establishments are far from one another
7. Answering any questions that customers might ask

**METER INSTALLERS PUT IN AND TAKE OUT METERS.**

**METER TESTERS TEST METERS TO SEE THAT THEY RUN PROPERLY.**

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WHAT SHOULD METER READERS BE LIKE?

## THEY SHOULD BE:

1. Tactful
2. Patient
3. Alert
4. Polite

## THEY SHOULD HAVE:

1. A pleasing personality
2. Normal vision and hearing
3. Normal use of feet and legs
4. No back injuries or weight problems

## THEY SHOULD BE ABLE TO:

1. Deal with the public in a courteous and helpful way
2. Walk most of the day
3. Write legibly
4. Use basic arithmetic quickly and accurately
5. Pass a physical examination

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are business arithmetic, English, and speech.

## AFTER HIGH SCHOOL:

Most employers prefer to hire someone who has graduated from high school. You will receive your training on the job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, meter readers earned approximately \$2.75 an hour.
2. Their starting wage was about \$2.25 an hour.
3. Some earned as much as \$3.75 an hour depending upon their length of employment.

WHAT ARE WORKING CONDITIONS LIKE?

1. You will spend most of the day walking and sometimes climbing stairs.
2. You will work outdoors in all kinds of weather.
3. Dogs may be a nuisance.
4. Unpleasant people may also be a nuisance.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Every community has some sort of meter reader. In smaller communities this may be a part-time job only. Most meter readers work in the larger population areas.

**TYPE OF INDUSTRY:**

Gas and electric companies and water and electricity departments of the public utilities employ almost all meter readers.

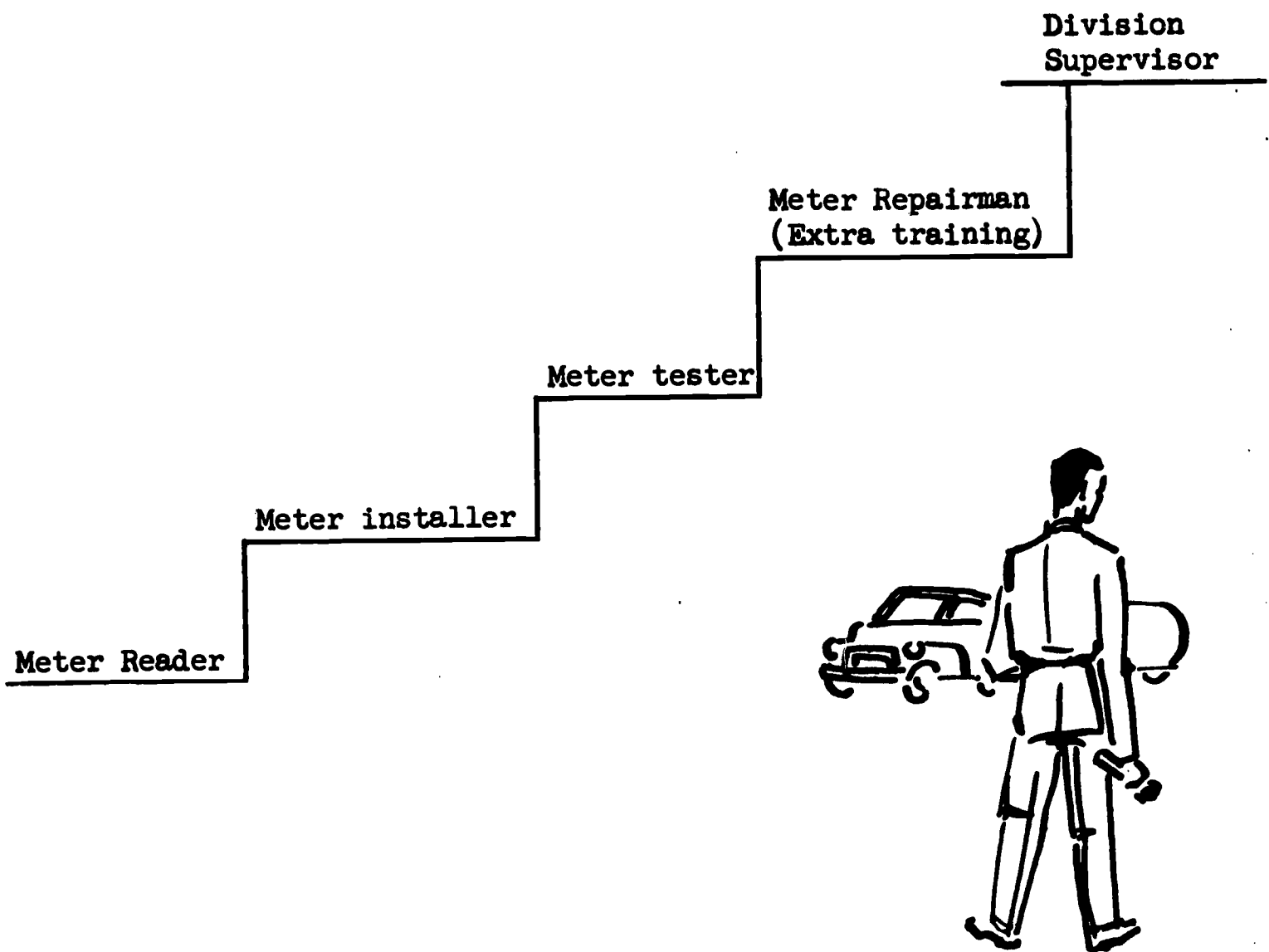
**Vocational Information For Education and Work**

Meter Reader - DOT Code 239.588  
(July 67)

IS THERE A NEED FOR METER READERS IN UTAH?

1. In 1965 there were 113 meter readers in Utah. It is predicted that by 1970 this number will increase to 116.
2. The need for meter readers will remain about the same during the next five years. There are generally openings for meter readers since many of them are promoted to other positions.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



## YOU ARE A MILLWRIGHT

### WHAT DO MILLWRIGHTS DO?

THEY MOVE AND INSTALL HEAVY INDUSTRIAL MACHINERY AND OTHER EQUIPMENT BY:

1. Disconnecting and taking apart industrial machinery either to move it to another location or to remove it altogether
2. Erecting new machinery and reassembling old machinery, carefully fitting all the parts together
3. Connecting machinery to motors, wheels, belts, and sometimes to other machinery
4. Often making special platforms or foundations on which they mount the equipment
5. Operating the machine to see that it runs properly
6. Using a wide variety of tools such as hoists, cranes, jacks, micrometers, calipers, etc., to move, install, and put together machinery

THEY MAY ALSO:

1. Repair and replace worn and broken parts
2. Inspect and adjust machinery to keep it in good running order
3. Follow blueprints while assembling machinery
4. Do the work of a welder, carpenter, pipefitter or machinist

WHAT SHOULD MILLWRIGHTS BE LIKE?

**THEY SHOULD BE:**

1. Agile
2. In good physical condition
3. Mechanically inclined
4. Energetic

**THEY SHOULD HAVE:**

1. Good finger and hand coordination
2. Above average strength
3. An eye for judging size and distance
4. An ability to work with tools and machinery

**THEY SHOULD BE ABLE TO:**

1. Use mathematics to solve problems
2. Lift, stoop, crawl under and climb over machinery
3. Handle and lift heavy equipment
4. Read blueprints
5. Work in awkward or cramped positions for long periods of time
6. Visualize problems, analyze them, and solve them

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are machine shop practice, welding, mechanical drawing, shop, algebra, and mathematics.

**AFTER HIGH SCHOOL:**

1. The best way to train for this job is as an apprentice. As an apprentice, you will receive formal training on the job and in the classroom for a period of four years.
2. Some workers work as helpers to skilled millwrights for a period of years until they have enough experience to be classified as skilled workers.
3. Utah Trade Techs. in Salt Lake and Provo offer many courses in subjects that millwrights need to know. There are no specific programs for millwrights.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the union wage for millwrights working in construction was \$4.35 an hour.
2. Apprentices start at about half the regular millwright's salary. They receive a raise every six months of their four-year apprenticeship.
3. Helpers start at about \$2.00 an hour.
4. Most millwrights work in construction and may be laid off during winter months or between jobs. Some millwrights may be employed year-round in large factories. Their salary would be from \$3.00 to \$4.00 an hour. Most maintenance work is done by the maintenance mechanic.

WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions will vary with the industry. Some establishments are clean, well-lighted, and well-ventilated, while others may be dirty, dingy, and stuffy.
2. You may have to travel to different construction sites throughout the state.
3. You may work inside or outdoors
4. Some of your work will be done in stooped or cramped positions close to the floor, and some of it will be done in high places on top of ladders and scaffolding.
5. Much of your work is done on dirty, greasy machines and you will have to tolerate having dirt and grease on your hands and clothes.
6. There is danger of common shop injuries such as cuts and bruises and falls from scaffolding. However, required safety equipment prevents many of these accidents.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most of Utah's millwrights are employed in the construction and manufacturing industries which are located in the Salt Lake-Ogden-Provo area.

## TYPE OF INDUSTRY:

Construction companies, companies that manufacture and install all types of machinery and large industrial companies such as Geneva Steel and Kennecott Copper employ the majority of millwrights.

Vocational Information For Education and Work

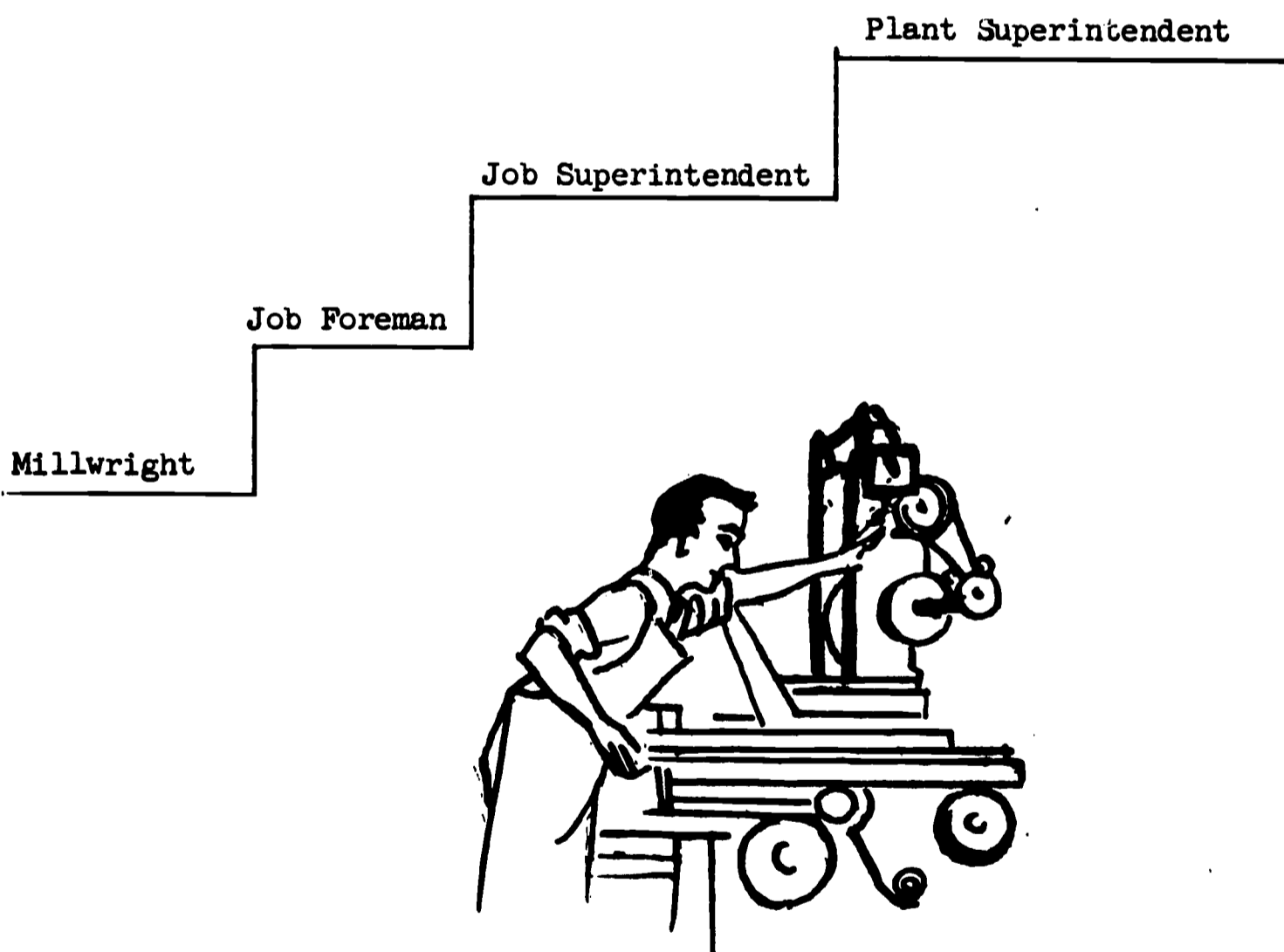
Millwright--Dot Code 638.281

(July 67)

### IS THERE A NEED FOR MILLWRIGHTS IN UTAH?

1. In 1965 there were 243 millwrights in Utah. It is predicted that by 1970 this number will increase to 255.
2. The need for millwrights will continue to rise due to the number of companies that are using more and more machinery to do their work.

### CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A MINER****WHAT DO MINERS DO?**

**THEY EXTRACT COAL AND METAL ORE FROM BENEATH THE SURFACE OF THE EARTH**

**THEY:**

1. Drill holes in rock faces using air-powered hand drills or drills mounted on railroad cars
2. Fill the holes with explosive charges to blast the ore or coal loose
3. Operate scooping devices which run back and forth through the mine picking up loose ore
4. Operate specialized machinery to work particular types of veins of coal
5. Operate motorized loading and hauling machines to take the ore or coal to the surface
6. Install strong timber to support the walls and roof of the mine

**THEY MAY ALSO:**

1. Make minor repairs on machinery
2. Train inexperienced workers
3. Learn to recognize valuable veins of ore-bearing rock



WHAT SHOULD MINERS BE LIKE?

## THEY SHOULD BE:

1. Physically fit
2. Willing to do hard work
3. Dependable

## THEY SHOULD HAVE:

1. Full use of both hands and legs
2. Above average strength
3. Good judgment

THEY SHOULD BE ABLE TO:

1. Do heavy lifting
2. Work in awkward positions
3. Tolerate dirt, dust, heat, and noise
4. Work underground

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are shop courses, science, arithmetic and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is not required, but may be helpful in obtaining a position.
2. Training will be received on the job.
3. The College of Eastern Utah offers courses in mining which are helpful in obtaining a position.

### HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for miners in Utah was \$2.90 per hour.
2. Their starting salary was \$2.40 per hour
3. Some miners earned as much as \$4.00 per hour

### WHAT ARE WORKING CONDITIONS LIKE?

1. Temperatures range from relatively cool to hot and humid
2. The work is physically demanding
3. The most common cause of serious injury is falling rock
4. Working in close quarters underground may be very unpleasant for some individuals

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION

The major mining districts in Utah are located in Carbon, Emery, Summit, Wasatch, Grand, Juab, and Salt Lake Counties. Park City, Price, Lark, and Moab are cities which are engaged in mining.

#### TYPE OF INDUSTRY

Coal mining is the major type of underground mining done in Utah. Various metals such as lead, silver, and zinc are also mined extensively.

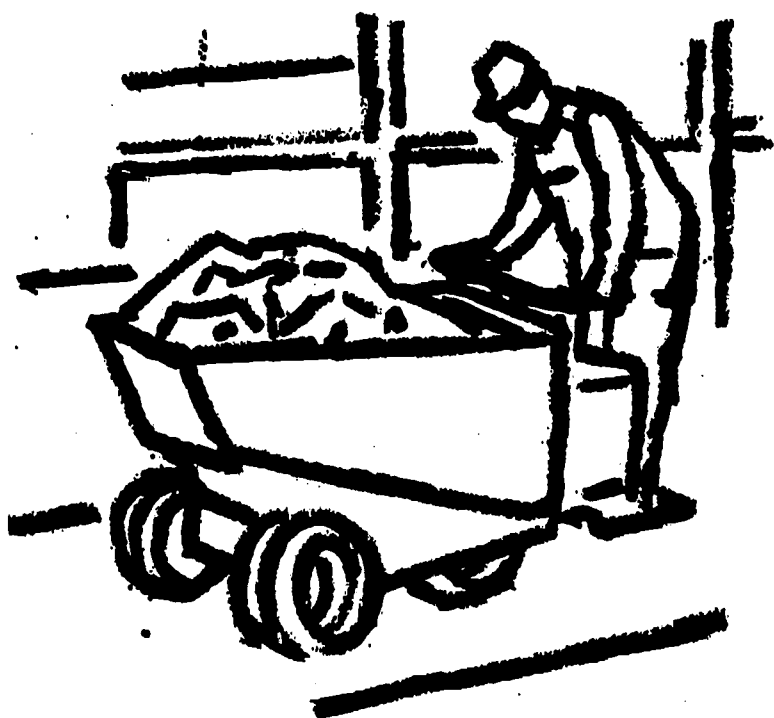
## Vocational Information For Education and Work

Miner - DOT Code 939.281 (July 1967)

IS THERE A NEED FOR MINERS IN UTAH?

1. In 1965 there were approximately 6000 miners in Utah. This number is expected to decrease slightly by 1970 due to more efficient mining methods and limited supplies of coal.
2. Normal turnover and retirements will produce a number of job openings in the near future.

CAN YOU ADVANCE?



Inspector

Foreman

Miner

Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security



**Y O U A R E A N U R S E A I D****WHAT DO NURSE AIDS DO?**

**THEY HELP THE PROFESSIONAL NURSING STAFF TAKE CARE OF HOSPITAL PATIENTS AND THEIR NEEDS.**

**THEY:**

1. Answer signal lights and bells to see what the patient needs
2. Help patients dress and undress
3. Change and make beds
4. Give baths and back rubs
5. Serve meals and feed patients who need help
6. Move patients to and from their rooms in wheel chairs, on wheeled carriages or by helping them walk
7. Take and record the patient's temperature and blood pressure
8. Clean and sterilize equipment
9. Give and remove bedpans.

**THEY MAY ALSO:**

1. Weigh and measure patients
2. Exercise patients
3. Clean the patient's room
4. Run errands
5. Fill ice bags and hot water bottles

**IN ADDITION MALE AIDS:**

1. Lift heavy patients and set up heavy equipment
2. Shave patients in preparation for surgery.

WHAT SHOULD NURSE AIDS BE LIKE ?

## THEY SHOULD BE:

1. Interested in people
2. Patient
3. Tactful
4. Understanding
5. Dependable
6. Concerned with personal cleanliness.

## THEY SHOULD HAVE:

1. A desire to serve the sick
2. Normal hearing and vision
3. Full use of both hands and legs
4. Good physical health
5. Good judgment
6. Average intelligence

## THEY SHOULD BE ABLE TO:

1. Stand and walk for long periods of time
2. Do some heavy lifting
3. Tolerate bad odors and unpleasant sights
4. Work well with others
5. Follow instructions and work under close supervision
6. Do routine work

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL

Subjects that will help prepare you for this job are health, English and physiology.

## AFTER HIGH SCHOOL

1. Some employees hire persons who have only completed one or two years of high school. However, high school graduates are preferred.
2. You will receive your training on the job. It will last approximately three months.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, nurse aids in Utah made from \$65 - \$75 a week, depending upon their experience and length of time employed.
2. Their starting salary was \$55 a week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Most hospitals are well-lighted, well-ventilated pleasant places to work.
2. You will be subject to some unpleasant odors and sights.
3. You may be exposed to some diseases.

WHERE IN UTAH WILL YOU WORK?

## TYPE OF PLACE

Hospitals, including mental hospitals, nursing homes, and clinics employ practically all nurse aids.

## GEOGRAPHICAL LOCATION

1. The majority of Utah's nurse aids are employed in the Davis, Salt Lake, Utah, Box Elder and Weber county area.
2. Nurse aids may work anywhere in the state that one of the above mentioned establishments is located.

Vocational Information For Education and Work

Nurse Aid - DOT CODE 355.878  
(July 1967)

IS THERE A NEED FOR NURSE AIDS?

1. In 1965, there were 3,573 nurse aids in Utah. It is predicted that by 1970 this number will increase to 5,100.
2. This field is open for both men and women.

CAN YOU ADVANCE?

Nurse aid jobs are considered "dead end" jobs. You will not be able to advance unless you receive additional training or schooling in some other area of hospital work.



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A NURSEMAID****WHAT DO NURSEMAIDS DO?****THEY TAKE CARE OF CHILDREN BY:**

1. Supervising the children's play activities
2. Keeping a watchful eye on them
3. Playing games with them
4. Reading to them
5. Dressing and undressing them
6. Preparing their meals and feeding them
7. Putting them to bed

**THEY MAY ALSO:**

1. Give baths
2. Take care of minor cuts and injuries
3. Discipline the child for bad behavior
4. Prepare formulas and change diapers for babies
5. Take the child for walks

**AT TIMES, THEY MAY BE REQUIRED TO DO HOUSEHOLD TASKS SUCH AS:**

1. Washing the dishes
2. Ironing and washing
3. Cleaning the house
4. Grocery shopping

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WHAT SHOULD NURSEMAIDS BE LIKE?

## THEY SHOULD BE:

1. Agreeable
2. Trustworthy
3. Neat
4. Clean
5. Patient
6. Well mannered

## THEY SHOULD HAVE:

1. Good health
2. Normal hearing and vision
3. An interest in children
4. Good judgment
5. Stable emotions
6. A pleasing personality

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are:

1. Home economics
2. Sewing
3. Cooking
4. Psychology

## AFTER HIGH SCHOOL:

No additional training is required of the nursemaid. She should receive her training at home and on the job.

### HOW MUCH MONEY WILL YOU MAKE?

1. You will make from 75¢ to \$1.50 an hour depending upon your experience and the type of job you accept.
2. Some nursemaids live with the family for whom they work and receive board and room.

### WHAT ARE WORKING CONDITIONS LIKE?

Your working conditions will be different for each job. They may vary from:

1. A tiny apartment to a large private home
2. Clean comfortable surroundings to cluttered uncomfortable surroundings
3. The noise and confusion of several children to the peace and quiet of one well-behaved child
4. A part-time job to a 24-hour-a-day job

### WHERE IN UTAH WILL YOU WORK?

1. Most opportunities for nursemaids are found in large cities where there is a large percentage of working mothers and socially active women.
2. There will be a small demand for nursemaids in smaller cities.

## Vocational Information For Education and Work

Nursemaid - DOT Code 307.878  
(July 67)

IS THERE A NEED FOR NURSEMAIDS IN UTAH?

1. In 1965 there were 2,025 nursemaids in Utah. It is predicted that by 1970 this number will increase to 2,250.
2. The need for nursemaids will continue to rise because of the number of working mothers and also the number of people who can afford to have this service.

CAN YOU ADVANCE?

The only advancement will be in your reputation as a nursemaid. If you are well known then you can be more choosy in your selection of jobs.



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



YOU ARE AN OFFICE MACHINE SERVICEMAN

WHAT DO OFFICE MACHINE SERVICEMEN DO?

THEY INSPECT, CLEAN, ADJUST, AND REPAIR THE BUSINESS MACHINES THAT ARE PART OF EVERY MODERN OFFICE BY:-

1. Determining what is causing a machine to operate improperly
2. Interviewing the operator, visually inspecting the machine, or disassembling the machine to find defects
3. Making minor repairs in the office where the machine is located
4. Servicing the machine by checking and adjusting the controls

THEY MAY ALSO:

1. Specialize in a particular type of machine such as typewriter, accounting machine, calculator, or duplicator
2. Take the machine to the repair shop to do extensive repair work
3. Train office workers in the correct use of the various office machines
4. Sell new machines
5. Completely disassemble and reassemble machines

WHAT SHOULD OFFICE MACHINE SERVICEMEN BE LIKE?

THEY SHOULD BE:

1. Patient
2. Friendly
3. Precise in their work
4. Dependable

THEY SHOULD HAVE:

1. Good vision and hearing
2. Good finger coordination
3. Mechanical ability
4. A concern for detail

THEY SHOULD BE ABLE TO:

1. Take care of many details
2. Get along well with others
3. Work well in spite of interruptions
4. Express themselves clearly

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help you prepare for this job are shop courses, science courses, arithmetic, electricity, speech, and English.

AFTER HIGH SCHOOL:

1. A high school diploma is usually required.
2. Training will be received on the job. Employers prefer to hire those who have an interest in the work and a desire to learn. The ability to work with the public is considered important.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for office machine servicemen in Utah was from \$125 to \$150 per week.
2. Their starting salary was from \$75 to \$100 per week.
3. Some office machine servicemen made as much as \$200 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Servicing of business machines is cleaner and lighter work than most other mechanical trades.
2. Servicemen generally wear business suits and work in offices where machines are used.
3. Contact with the public is frequent.
4. This occupation is comparatively free from the danger of accidents.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Approximately 85 to 95% of the office machine servicemen in Utah work in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake and Utah counties. A small number work in rural communities.

## TYPE OF INDUSTRY:

Nearly all office machine servicemen are employed by companies that sell business machines and repair them. A small number of servicemen operate their own shops.

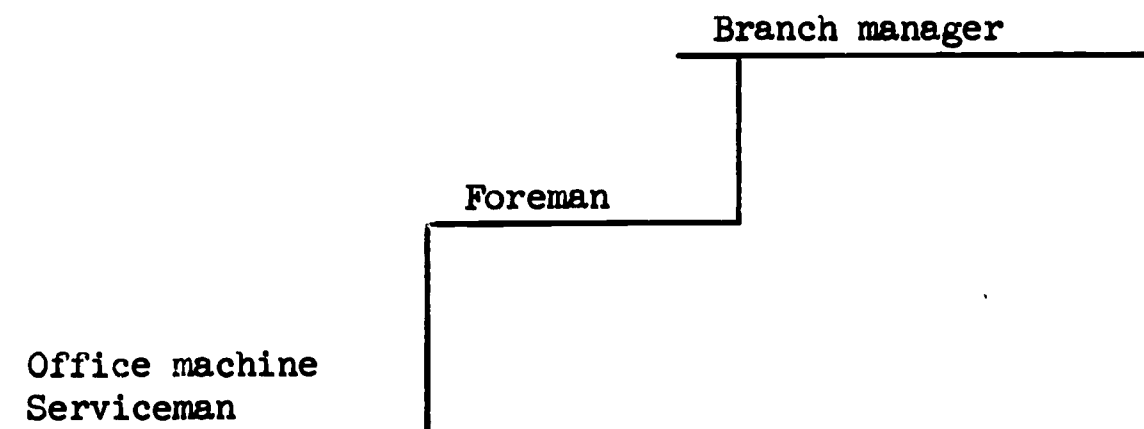
**Vocational Information For Education and Work**

Office Machine Serviceman - DOT Code 633.281  
(July 67)

IS THERE A NEED FOR OFFICE MACHINE SERVICEMEN?

1. In 1965 there were 200 office machine servicemen in Utah. It is predicted that by 1970 this number will increase to 300.
2. As more and more businesses switch to the use of automated office machines, the need for servicemen will rise accordingly.

CAN YOU ADVANCE?



## YOU ARE AN OPTICIAN

### WHAT DO OPTICIANS DO?

THEY FIT GLASSES TO CUSTOMERS AND SELL FRAMES.

THEY:

1. Make up work orders for glass lenses based on a prescription
2. Take facial measurements of the customer
3. Help the customer select suitable frames
4. Check the lenses and frames to see that they are satisfactory to the customer
5. May do some grinding and finishing of lenses

SOME OPTICIANS MAY FIT CONTACT LENSES BY:

1. Following optometrists' or physicians' prescriptions
2. Using precision instruments to measure the curvature of the cornea of the eye
3. Giving special instruction in inserting and removing the contact lenses
4. Using more skill, care, and patience than when working with conventional eye glasses



WHAT SHOULD OPTICIANS BE LIKE?

## THEY SHOULD BE:

1. Patient
2. Proud of their work
3. Friendly
4. Polite
5. Honest

## THEY SHOULD HAVE:

1. A concern for detail
2. A liking for people
3. Good eye-hand coordination
4. Good finger coordination
5. Sales ability

## THEY SHOULD BE ABLE TO:

1. Meet the public
2. Do precise work
3. Work without close supervision

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, physics, shop courses, speech, salesmanship, and English.

## AFTER HIGH SCHOOL:

1. Most employers require a high school diploma.
2. Training will be received on the job from an experienced optician. On-the-job training may last several years.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for opticians in Utah was \$130 per week.
2. Their starting salary was \$70 per week.
3. Some opticians earned as much as \$160 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. The surroundings are usually well-lighted and well-ventilated.
2. The work requires little exertion.
3. Patience is required while dealing with the public.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The majority of Utah's opticians work along the Wasatch Front area, consisting of Box Elder, Davis, Salt Lake, Utah, and Weber counties.

## TYPE OF INDUSTRY:

Nearly all opticians in Utah work for retail and wholesale firms that sell conventional glasses and contact lenses. Some opticians operate their own retail businesses.

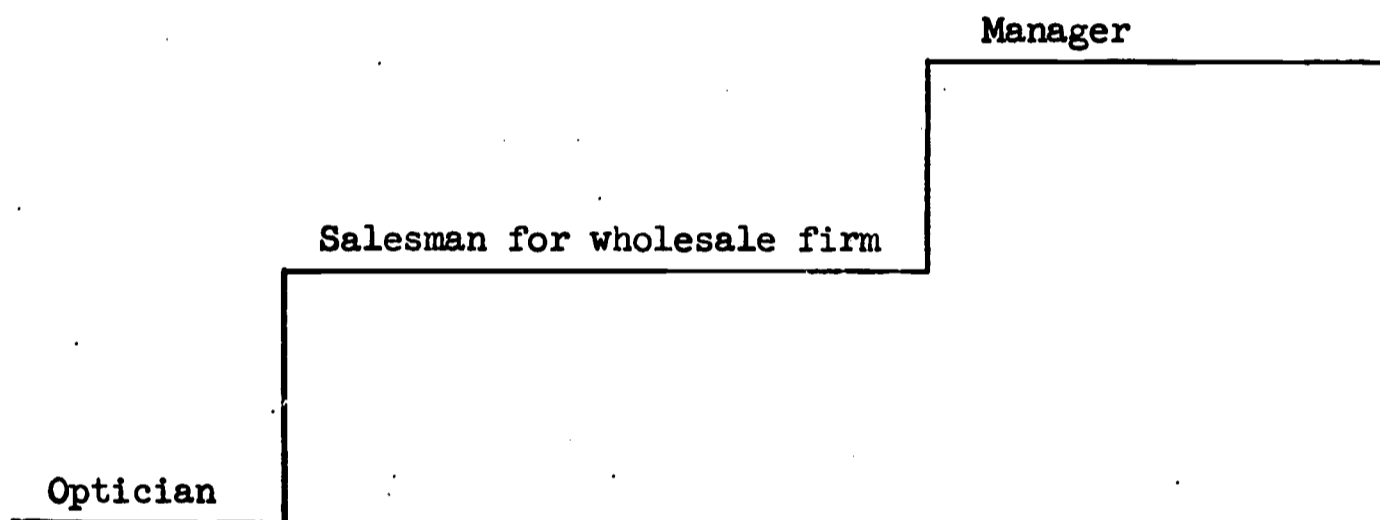
**Vocational Information For Education and Work**

Optician - DOT Code 713.251  
(July 67)

IS THERE A NEED FOR OPTICIANS?

1. In 1965 there were approximately 100 opticians in Utah. It is predicted that by 1970 this number will increase to 130.
2. The increase in production of prescription lenses is expected to keep the demand for opticians high.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## YOU ARE A PAINTER

WHAT DO PAINTERS DO?

THEY PAINT ALL TYPES OF SURFACES SUCH AS WOOD, STEEL, STUCCO, PLASTER, AND OTHER MATERIAL.

THEY PREPARE TO PAINT THE SURFACE BY:

1. Removing the old paint with a blowtorch, by sandblasting, by using a scraper and wire brush, or by using a chemical paint remover
2. Sandpapering minor irregularities, filling cracks and holes with putty, and removing excessive dirt or grease
3. Choosing the correct type of paint, lacquer, or enamel
4. Mixing the paint and other ingredients when necessary

AFTER PREPARING THE SURFACE TO BE PAINTED THEY:

1. Apply the paint with a brush, spray gun, or roller
2. Use the correct type brush or roller to produce a smooth and even finish
3. Apply a prime coat, when needed, to provide a base on which to apply the new paint
4. May do specialized work such as trimming woodwork, applying gold leaf, or wood graining work
5. Do touch up work after painting a surface

WHAT SHOULD PAINTERS BE LIKE?

**THEY SHOULD BE:**

1. Physically fit
2. Capable of using both hands
3. Proud of their work
4. Dependable
5. Neat

**THEY SHOULD HAVE:**

1. A concern for detail
2. Normal vision
3. Good color discrimination
4. Good eye-hand coordination

**THEY SHOULD BE ABLE TO:**

1. Stand for long periods of time
2. Work accurately and rapidly
3. Climb ladders and scaffolding
4. Tolerate paint fumes

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are shop courses, arts and crafts, and English.

**AFTER HIGH SCHOOL:**

A high school diploma is usually required. The best way to train for this job is as an apprentice. As an apprentice you will receive on-the-job training and related classroom instruction. After three years as an apprentice you may become a fully qualified worker called a journeyman. Some workers start as helpers.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the union wage for painters was \$4.00 per hour.
2. The starting salary for apprentices was \$2.00 per hour.
3. Some painters earned as much as \$4.25 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Painters work both outdoors and inside.
2. Much of the outdoor work requires the use of ladders and scaffolds.
3. The work is seasonal and employment is difficult to find during the winter months.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Approximately 75% of the painters in Utah work in the Salt Lake City-Ogden-Provo area. The remainder work throughout the state.

**TYPE OF INDUSTRY:**

The majority of painters are employed in construction work. A substantial number are employed in building maintenance and repair.

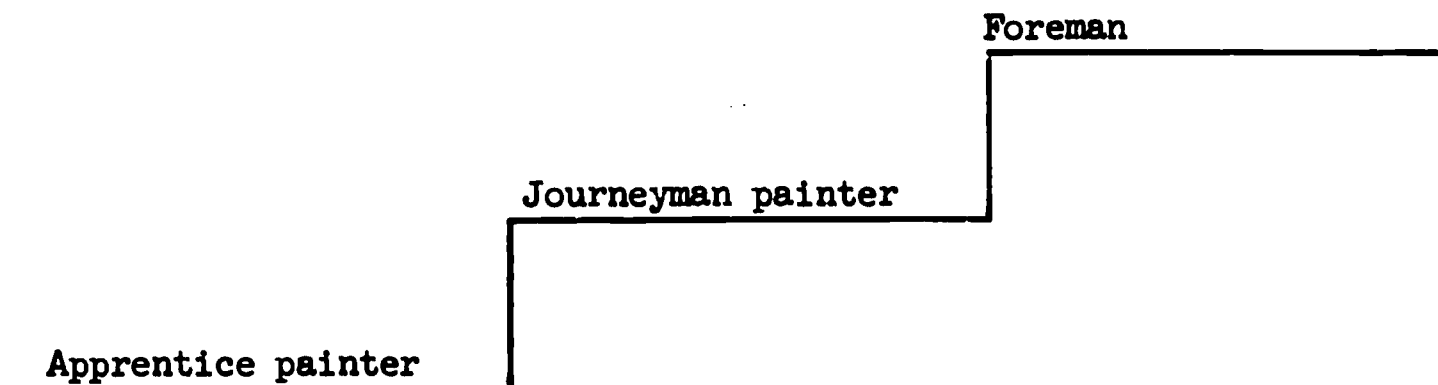
**Vocational Information For Education and Work**

Painter--Dot Code 841.781  
(July 67)

### IS THERE A NEED FOR PAINTERS IN UTAH?

1. In 1965 there were 1,500 painters in Utah. It is predicted that by 1970 this number will increase to 1,800.
2. The number of workers needed in the occupation is not expected to increase very rapidly. New techniques of painting have made it possible for fewer men to accomplish more.

### CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## Y O U A R E A P H O T O E N G R A V E R

WHAT DO PHOTOENGRAVERS DO?

THEY TAKE ART WORK SUCH AS PICTURES, MAPS, GRAPHS, AND DRAWINGS AND REPRODUCE IT ON METAL PLATES FOR PRINTING.

THEY:

1. Photograph the art work to be printed and develop the negative (Cameraman)
2. Print the picture on a metal plate by placing the negative on a plate which has been covered with a special solution and exposing it to a light (Printer)
3. Place the plate in acid which dissolves away that part of the surface which has no picture on it leaving the picture to be printed standing out (Etcher)
4. Inspect and touch up the plate with handtools, correcting mistakes and improving color tones (Finisher)
5. Cut away metal from the nonprinting part of the plate, including any area of the picture not to be printed, to prevent it from touching the ink rollers during printing (Router)
6. Put the metal plate on a base, such as a block of wood, to make it the right height for printing (Blocker)
7. Print a sample copy to be proofed (Proofer)

PHOTOENGRAVERS MAY PERFORM ALL OF THE ABOVE TASKS OR SPECIALIZE IN ANY ONE PARTICULAR TASK AND BE REFERRED TO AS EITHER CAMERAMEN, PRINTERS, ETCHERS, FINISHERS, ROUTERS, BLOCKERS, OR PROOFERS.



WHAT SHOULD PHOTOENGRAVERS BE LIKE?

## THEY SHOULD BE:

1. Patient and persistent
2. Artistic
3. Proud of their work
4. Original
5. Precise

## THEY SHOULD HAVE:

1. Good judgment
2. An eye for design
3. Good eyesight
4. Real good color vision
5. Good finger coordination

## THEY SHOULD BE ABLE TO:

1. Do accurate and detailed work
2. Work carefully under pressure to meet deadlines
3. Visualize objects and color arrangements in print
4. Notice printing mistakes quickly
5. Stand for long periods of time
6. Distinguish well between different colors

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are art, physics, chemistry, photography, graphic arts, basic mathematics, and English

## AFTER HIGH SCHOOL:

1. The best way to become a fully qualified photoengraver, is to train for six years as an apprentice. During this time, you will receive supervised on-the-job training and classroom instruction.
2. Some workers learn the trade informally as helpers. They do not advance as fast as apprentices.
3. Utah Technical College, Salt Lake offers a 12 month program in the field of printing. Graduates of this course are in a good position to find a job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, photoengravers in Utah earned from \$3.25 - \$4.25 an hour depending upon where they worked and their experience.
2. Some photoengravers working for small shops earned less than \$3.25 an hour.
3. Some photoengravers working for large printing agencies earned more than \$4.25 an hour.
4. Apprentices begin at just a little over half the regular salary.

WHAT ARE WORKING CONDITIONS LIKE?

1. Photoengravers work in well-lighted comfortable surroundings.
2. Cameramen will spend much of their time in the darkroom.
3. Most photoengravers stand to work. Finishers sit to do their work.
4. This job requires no heavy lifting.
5. There is often an odor of acid in the work area.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

About 80% of Utah's photoengravers work in the Wasatch Front area of Box Elder, Weber, Davis, Salt Lake, and Utah counties.

## TYPE OF INDUSTRY:

Commercial printing companies, newspaper companies, book and magazine printing companies and advertising agencies employ the majority of photoengravers.

Vocational Information For Education and Work

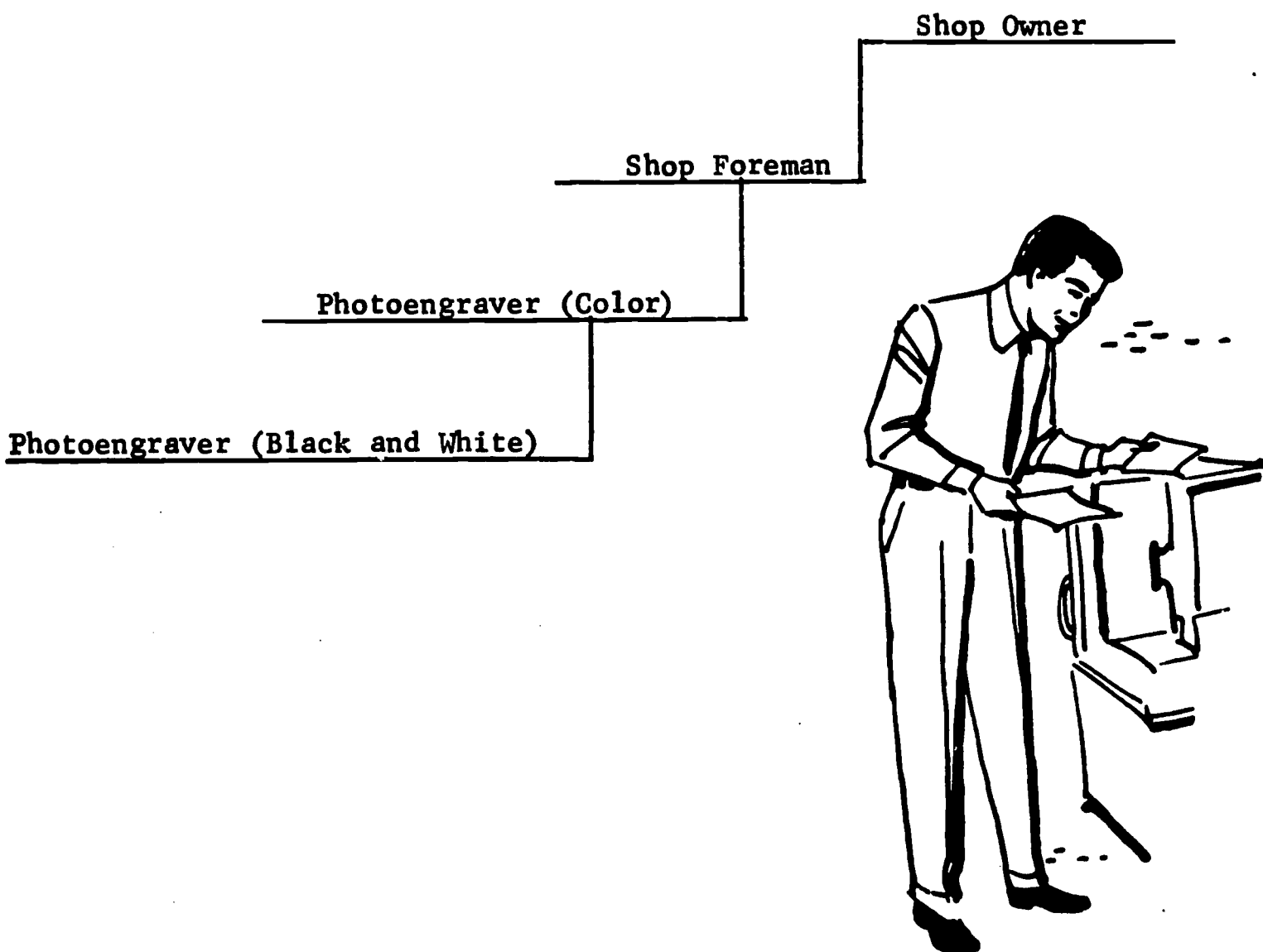
Photoengraver - DOT Code 971.381  
(July 67)

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IS THERE A NEED FOR PHOTOENGRAVERS IN UTAH?

1. In 1965, there were 132 photoengravers in Utah. It is predicted that by 1970, this number will increase to 148.
2. The need for photoengravers will increase moderately. Even though the printing industry is growing, new and better machines and the rising popularity of lithography will keep the need for photoengravers from growing rapidly.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A PHOTOGRAPHER****WHAT DO PHOTOGRAPHERS DO?**

**THEY TAKE PICTURES OF PERSONS, PLACES AND THINGS, SETTING UP AND ADJUSTING THE CAMERA THAT SUITS THEIR PURPOSE.**

**THEY:**

1. Carefully arrange lighting and general background, using reflectors, screen and filters.
2. Use a variety of cameras such as miniature, still, motion picture, and others.
3. Use special camera lenses such as telescopic, wide angle, close up, and others.
4. Use the correct type of film according to the type of picture to be taken, lighting conditions, camera, and filters.
5. Must be able to adjust cameras and make minor repairs.

**THEY MAY ALSO:**

1. Develop and enlarge film.
2. Sell photographic equipment and supplies.
3. Specialize in a particular area such as portrait work, commercial, scientific, or industrial.

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WHAT SHOULD PHOTOGRAPHERS BE LIKE?**THEY SHOULD BE:**

1. Precise in their work
2. Patient and persistent
3. Enthusiastic
4. Proud of their work
5. Artistic

**THEY SHOULD HAVE:**

1. An eye for judging size and distance
2. Normal vision
3. Good color discrimination

**THEY SHOULD BE ABLE TO:**

1. Work skillfully with delicate and expensive equipment
2. Deal with people
3. Stand for long periods of time
4. Take care of many details

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?**IN HIGH SCHOOL:**

Subjects that will help you prepare for this job are chemistry, art, photography, and English.

**AFTER HIGH SCHOOL:**

1. A high school diploma is usually required.
2. Utah technical college in Provo and most of the colleges and junior colleges in the state offer courses in photography. Employers prefer to hire applicants who have taken these courses.
3. Some photographers start as helpers and learn on the job.

**HOW MUCH MONEY WILL YOU MAKE?**

1. In 1966 the average salary for photographers in Utah was \$125 per week.
2. Their starting salary was \$75.00 per week.
3. Some photographers earned as much as \$200 per week.

**WHAT ARE WORKING CONDITIONS LIKE?**

1. Working conditions are generally pleasant
2. There is usually little pressure involved in this work
3. Some photographers are required to travel
4. Self-employed photographers generally work longer hours than salaried workers
5. Conditions vary greatly with the type of photography done.

**WHERE IN UTAH WILL YOU WORK?****GEOGRAPHICAL LOCATION:**

Most photographers in Utah work in Salt Lake, Utah, Davis, Weber, and Box Elder Counties.

**TYPE OF INDUSTRY:**

Photographers are employed by portrait studios, newspapers, commercial studios, camera stores, magazines and advertising agencies.

**Vocational Information For Education and Work**

Photographer - DOT Code 143.062 (July 1967)

IS THERE A NEED FOR PHOTOGRAPHERS IN UTAH?

In 1965 there were 150 photographers in Utah. It is predicted that by 1970 this number will increase to 175.

CAN YOU ADVANCE?

There is no formal line fo advancement for photographers, but photographers who specialize usually earn more money.



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A PLUMBER (PIPEFITTER)****WHAT DO PLUMBERS DO?**

**THEY INSTALL WATER, GAS, AND WASTE DISPOSAL PIPES IN HOMES AND BUILDINGS BY:**

1. Studying blueprints to see where the pipes should go
2. Checking the required measurements for each kind of pipe
3. Cutting, bending, and threading pipe to make it fit the needed measurements
4. Fitting the pipes together, installing them floor by floor
5. Sealing the connecting joints with a substance that prevents leaks
6. Connecting the pipes to main water, gas and waste disposal lines belonging to the public utilities or companies that own them
7. Testing the pipes to see that there are no faults
8. Installing plumbing fixtures such as sinks, bathtubs, drains, etc.

**THEY REPAIR LEAKS AND BREAKS AND CLEAN OUT CLOGGED PIPES BY:**

1. Tracing down the leak and closing down the pipe line
2. Disconnecting and removing the faulty section and either repairing it or replacing it
3. Sometimes cutting through floors and walls to get at faulty sections of pipe

**THEY MAY ALSO PREPARE REMODELING PLANS FOR NEW PLUMBING INSTALLATIONS.**

**PIPEFITTERS INSTALL HIGH AND LOW PRESSURE PIPES THAT CARRY HOT WATER, STEAM, GASES, AND OTHER LIQUIDS IN INDUSTRIAL AND COMMERCIAL BUILDINGS SUCH AS OIL REFINERIES, CHEMICAL PLANTS, ETC.**



WHAT SHOULD PLUMBERS BE LIKE?**THEY SHOULD BE:**

1. Energetic
2. Dependable
3. Courteous
4. Strong and in good health

**THEY SHOULD HAVE:**

1. Mechanical ability
2. Good finger coordination
3. A good sense of touch
4. Initiative

**THEY SHOULD BE ABLE TO:**

1. Stand for long periods of time
2. Work in cramped uncomfortable positions
3. Get along well with others, especially customers
4. Work alone without close supervision
5. Do some strenuous work
6. Come up with original solutions for awkward or difficult problems

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are mathematics, chemistry, physics, welding, mechanical drawing, metal and wood shop and algebra.

**AFTER HIGH SCHOOL:**

1. The best way to become a fully qualified plumber is to train for five years as an apprentice. During this time you will receive supervised on-the-job training and classroom instruction.
2. Some workers learn the trade informally as helpers. They advance much slower than apprentices.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average pay for plumbers was \$4.65 an hour.
2. The starting salary for apprentices was \$2.10 an hour. They receive a raise every six months of their five-year apprenticeship.

WHAT ARE WORKING CONDITIONS LIKE?

1. During the winter months when construction is slow, you may be laid off for brief periods.
2. Working conditions vary from the inside of a home to the inside of a new, unheated building still under construction.
3. Some of your work will be done outdoors in all kinds of weather.
4. Much of your work will be done in damp, dark, cramped areas such as under buildings and other hard to get at places.
5. Plumbing is not dangerous but there are accidents from falling off ladders, cuts from sharp tools, and burns from torches and hot pipes. These accidents are reduced when safety rules are followed.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

About 75% of Utah's plumbers are employed in the Wasatch Front area which includes Box Elder, Davis, Salt Lake, Utah, and Weber counties. Many of them, however, travel to different construction sites throughout the state.

**TYPE OF INDUSTRY:**

Plumbing contractors working with construction companies employ many plumbers. Large industries employ pipefitters to maintain their pipe systems. A great number of plumbers are self-employed.

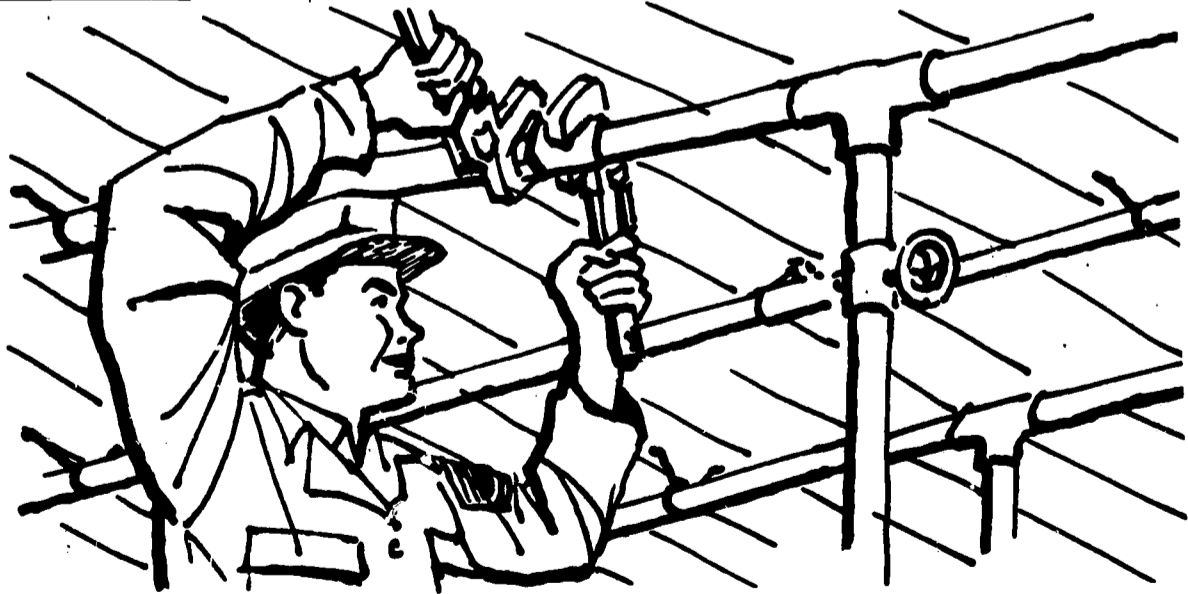
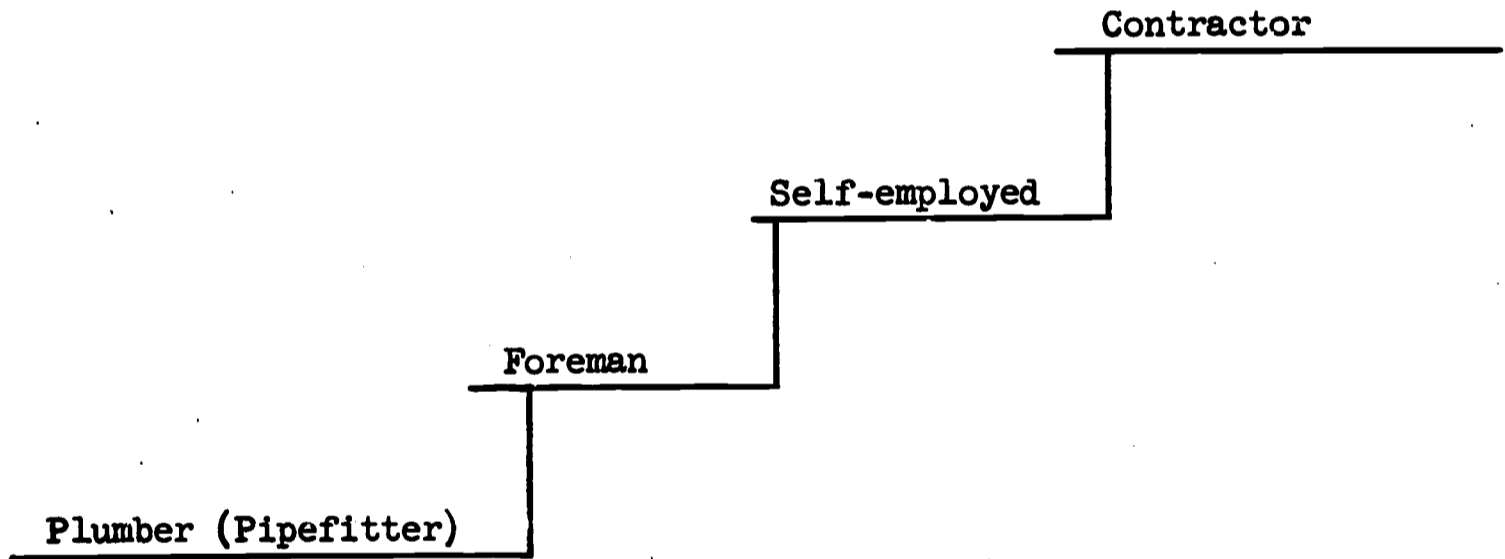
**Vocational Information For Education and Work**

Plumber (Pipefitter) - DOT Code 862.381  
(July 67)

IS THERE A NEED FOR PLUMBERS IN UTAH?

1. In 1965 there were 1,156 plumbers in Utah. It is predicted that by 1970, this number will increase to 1,331.
2. The need for plumbers will rise as the construction industry grows. A growth in the construction industry is predicted for Utah in the next three years. Also, increased use of plumbing facilities, such as extra bathrooms, will keep the demand for plumbers high.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



## YOU ARE A POLICEMAN

### WHAT DO POLICEMEN DO?

#### THEY:

1. Patrol assigned areas using motorcycles or patrol cars, or may walk
2. Are usually given a specific duty such as driving a patrol car, directing traffic, or working in city or county jails
3. Usually patrol alone during the day, but two men may work as a team after dark.

#### THEY MAY ALSO:

1. Investigate accidents, giving first aid when necessary, taking measurements and photographs, and issuing tickets to traffic violators
2. Investigate crimes, obtaining evidence and arresting suspects
3. Prepare written reports of their activities
4. Give assistance in an emergency such as a fire, riot, or serious accident
5. Perform various duties depending on the area of police work they are engaged in; detectives may investigate crimes such as narcotics violations; highway patrol men enforce laws related to automobile operations; and deputy sheriffs usually enforce laws outside of city limits.

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WHAT SHOULD POLICEMEN BE LIKE?

## THEY SHOULD BE:

1. Honest
2. Dependable
3. At least 21 years of age in most areas
4. Observant
5. Physically fit

## THEY SHOULD HAVE:

1. Good judgment
2. Good vision and hearing
3. A sense of responsibility
4. Stable emotions
5. Average strength

## THEY SHOULD BE ABLE TO:

1. Deal with all types of people
2. Take and give orders
3. Work without close supervision
4. Keep calm under pressure

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are history, social science, physical education, and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is usually required
2. Most candidates for police jobs are selected on the basis of a competitive test which involves physical abilities as well as mental abilities.
2. Military training in traffic control, investigation work, or police work is helpful in obtaining a job.

**HOW MUCH MONEY WILL YOU MAKE?**

1. In 1966 the average salary for policemen in Utah was \$500 per month.
2. Their starting salary was \$360 per month.
3. Some policemen made as much as \$700 per month.

**WHAT ARE WORKING CONDITIONS LIKE?**

1. Most of an officer's time is spent away from headquarters.
2. Policemen may be required to risk their own lives to help others.
3. This job may involve work on weekends and holidays.
4. Policemen are subject to call any time their services are needed.
5. Helping others may be personally satisfying.

**WHERE IN UTAH WILL YOU WORK?****GEOGRAPHICAL LOCATION:**

About 80% of the policemen in Utah work in Salt Lake, Davis, Weber, and Utah counties. There are opportunities for employment throughout the state.

**TYPE OF INDUSTRY:**

Policemen are employed by state, county and city government agencies.

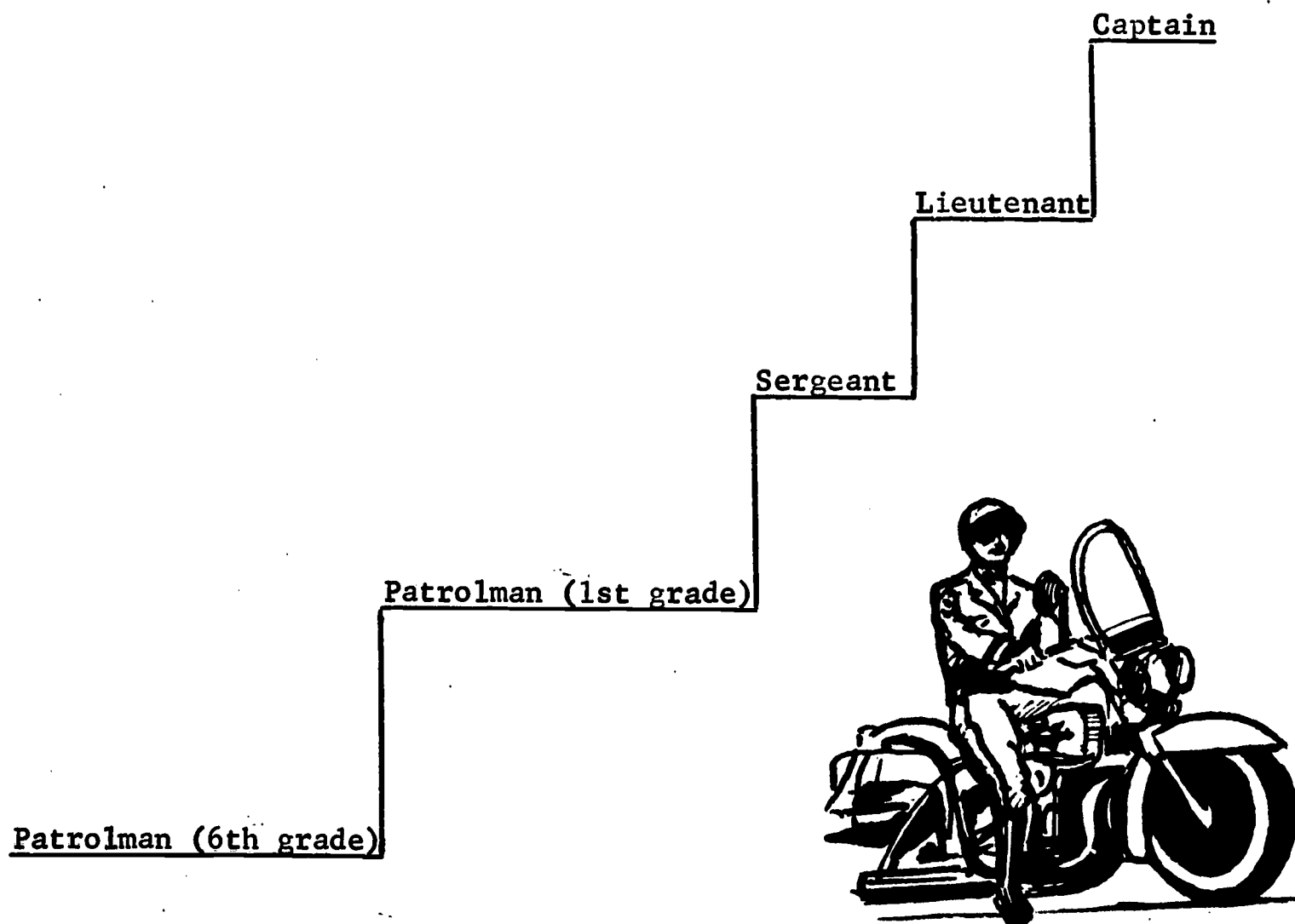
**Vocational Information For Education and Work**

Policeman - DOT Code 375.268  
(July 1967)

IS THERE A NEED FOR POLICEMEN IN UTAH?

1. In 1965 there were 1000 policemen in Utah. It is predicted that by 1970 this number will increase to 1200.
2. There is a great demand for well-qualified police officers.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
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Utah State Department of Employment Security**



**Y O U   A R E   A   P O S T A L   C L E R K****WHAT DO POSTAL CLERKS DO?**

**THEY SORT AND DISTRIBUTE MAIL, WORKING AS DISTRIBUTION CLERKS OR WINDOW CLERKS.**

**DISTRIBUTION CLERKS:**

1. Separate parcel post from paper mail
2. "Face" the mail by making sure all the letters face the same direction with the face down
3. Feed the "faced" mail into canceling machines which print the date and time of mailing
4. Sort the mail according to its destination
5. May operate machines that process mail automatically

**WINDOW CLERKS:**

1. Work at public windows in the lobby of the post office building
2. Accept material for mailing
3. Weigh letters and parcels to determine the amount of postage required
4. Register and insure mail
5. Sell money orders and stamps
6. Perform other services to help customers

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WHAT SHOULD POSTAL CLERKS BE LIKE?

THEY SHOULD BE:

1. In good health
2. Well mannered
3. Fast and accurate
4. Even tempered

THEY SHOULD HAVE:

1. A good memory
2. Good eye-hand coordination
3. A neat appearance
4. Good vision

THEY SHOULD BE ABLE TO:

1. Read rapidly
2. Do routine work
3. Deal with all types of people
4. Do some strenuous work

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help you prepare for this job are arithmetic, speed reading, speech, and English.

AFTER HIGH SCHOOL:

1. A high school diploma is not required, but is helpful in obtaining a position.
2. Applicants are selected on the basis of job experience and scores obtained on a written test.
3. Training will be received on the job.

**HOW MUCH MONEY WILL YOU MAKE?**

1. In 1966 the average wage for postal clerks in Utah was \$3.00 per hour.
2. Their starting wage was \$2.40 per hour.
3. Some postal clerks earned as much as \$3.50 per hour.

**WHAT ARE WORKING CONDITIONS LIKE?**

1. Working conditions differ according to the task assigned.
2. Distribution clerks usually work closely with other employees.
3. Window clerks deal continuously with the public.
4. The job usually demands speed and accuracy.
5. The work may involve lifting and carrying parcels and sacks of mail.
6. There is pressure to meet deadlines during rush periods.

**WHERE IN UTAH WILL YOU WORK?****GEOGRAPHICAL LOCATION:**

Most postal clerks are employed in Salt Lake, Utah, Weber, Davis, and Box Elder Counties. Other opportunities for employment may be found throughout the state.

**TYPE OF INDUSTRY:**

Postal clerks are employed by the Federal Government.

**Vocational Information For Education and Work**

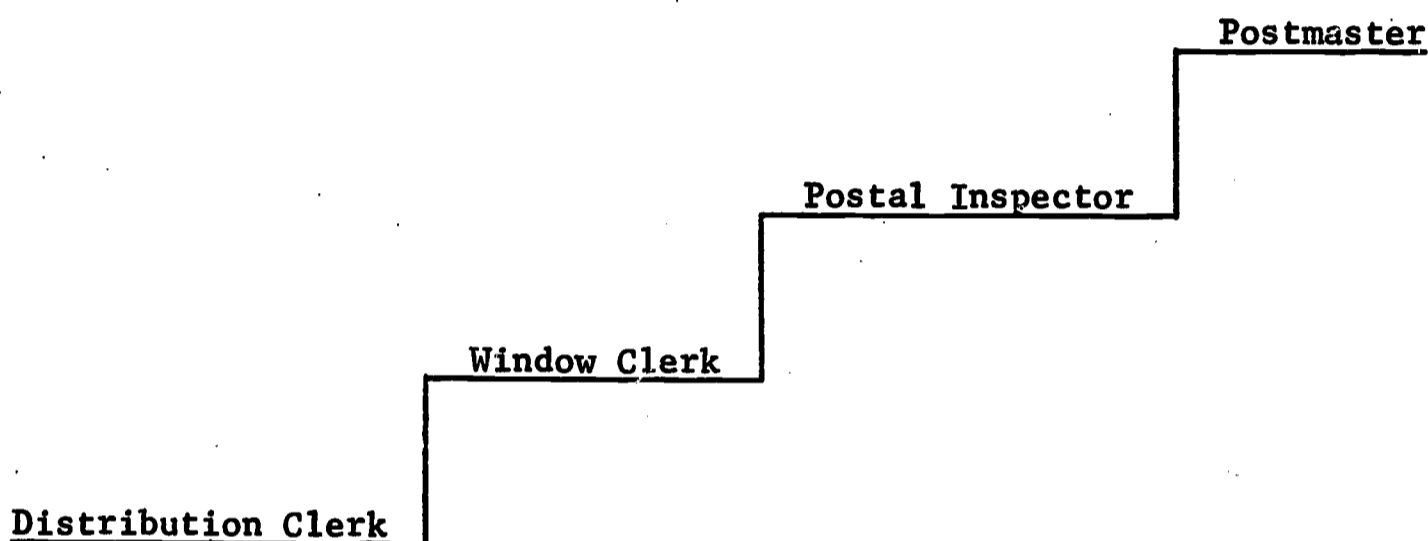
Postal Clerk - DOT Code 232.368  
(July 67)

IS THERE A NEED FOR POSTAL CLERKS IN UTAH?

1. In 1965 there were 1,400 postal clerks in Utah. It is predicted that by 1970 this number will increase to 1,700.

CAN YOU ADVANCE?

Opportunities for advancement are limited.



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



# YOU ARE A PRINTING PRESSMAN

## WHAT DO PRINTING PRESSMEN DO?

THEY SET UP, OPERATE, AND TAKE CARE OF PRINTING PRESSES THAT PRODUCE PRINTED MATTER BY:

1. Inspecting, cleaning, oiling and adjusting the press before printing
2. Placing the type forms and press plates received from the composing room (see job descriptions of compositor, linotype operator, photoengraver) on the press and lining up the margins
3. Filling the ink containers and adjusting the ink flow
4. Running off a proof sheet for approval
5. Looking for specific letters and areas on the proof sheet that didn't print clearly
6. Placing pieces of tissue paper or other material under the press plate where the unclear areas are to build up the type so that it will print clearly and evenly.
7. Setting an automatic counter and starting the press
8. Tending the presses while they're running, making sure that the paper feeds into the press smoothly, and checking the printed matter periodically to see that it's printing clearly

THEY MAY ALSO:

1. Feed paper into a smaller press by hand
2. Do the repair work on the presses when they break down
3. Operate a huge web-rotary press used by newspapers

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WHAT SHOULD PRINTING PRESSMEN BE LIKE?

**THEY SHOULD BE:**

1. Energetic
2. Proud of their work
3. Precise
4. Fairly strong  
(Some handicaps, such as deafness, or incomplete use of legs, will not prevent employment)

**THEY SHOULD HAVE:**

1. Mechanical ability
2. Good finger coordination
3. Good eyesight
4. Good color vision
5. Full use of hands

**THEY SHOULD BE ABLE TO:**

1. Stand and walk for long periods of time
2. Do some strenuous lifting of press plates and type forms
3. Stoop, kneel, and reach
4. Notice mistakes quickly in printed matter
5. Do detailed work
6. Work under pressure to meet deadlines
7. Use basic arithmetic
8. Visualize objects and color arrangements in print

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are chemistry, physics, shop, mathematics, graphic arts, and English.

**AFTER HIGH SCHOOL:**

1. The best way to become a fully qualified pressman is to train for four to six years, depending upon the type of press you use, as an apprentice. During this time, you will receive supervised on-the-job training and classroom instruction.
2. Some workers learn the trade informally as helpers. They do not advance as fast as the apprentice.
3. Utah Technical College, Salt Lake, offers a 12-month course in the skills of printing. Graduates of this course are in a good position to find work.

### HOW MUCH MONEY WILL YOU MAKE?

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1. In 1966 the average pay for printing pressmen was \$3.00 to \$3.75 an hour depending upon the type of press they operated.
2. In some small print shops, pressmen earned less than \$3.00 an hour.
3. Some pressmen working for large newspaper companies earned more than \$3.75 an hour.
4. The starting pay for apprentices was \$1.50 to \$2.00 an hour.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions vary from place to place. Newer establishments are generally well-lighted, clean, and air conditioned.
2. Pressmen stand for long periods to do their work.
3. You will have to do some lifting of heavy type forms and press plates.
4. Pressrooms are quite noisy. Some workers are required to wear ear protectors.
5. There is often pressure to meet newspaper and book deadlines.
6. There is some slight danger to hands and fingers from moving machine parts.
7. Depending upon the company for which you work, you may have to work late shifts or nights.

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION:

The majority of Utah's printing pressmen work in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake and Utah Counties. Small town printers generally handle every phase of the printing process.

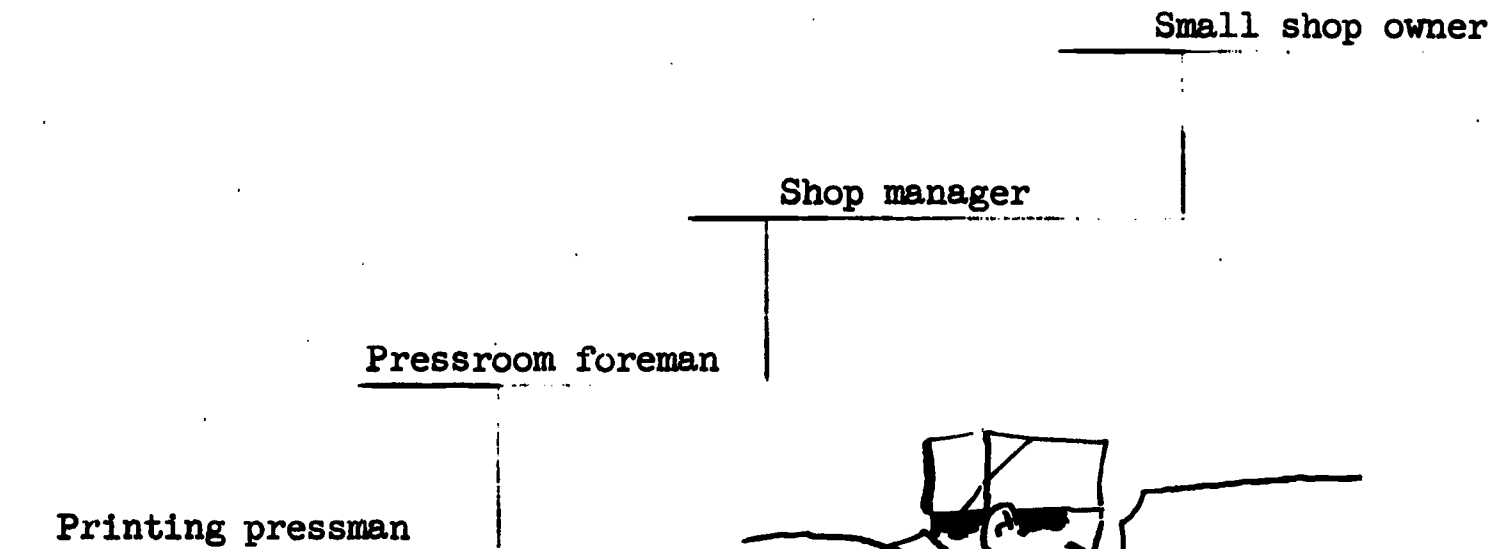
#### TYPE OF INDUSTRY:

Newspaper companies, commercial printing shops, book and magazine printing companies, and advertising agencies employ the majority of printing pressmen.

IS THERE A NEED FOR PRINTING PRESSMEN IN UTAH?

- 1. In 1965 there were 417 printing pressmen in Utah. It is predicted that by 1970 this number will increase to 510.
- 2. The need for printers will increase moderately. The printing industry will continue to grow but new and improved presses will require less pressmen.

CAN YOU ADVANCE?



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YOU ARE A PRODUCTION MACHINE OPERATOR

WHAT DO PRODUCTION MACHINE OPERATORS DO?

THEY:

1. Operate machines that shape metal to precise dimensions
2. May specialize on one machine or may operate several machines such as drill presses, lathes, milling machines, shapers, grinders, and others
3. Observe the machines they are operating to be sure that there are no malfunctions
4. Use simple gauges to check the accuracy of their work
5. Assist skilled machinists in the performance of their work

WITH ADDITIONAL TRAINING THEY MAY ALSO:

1. Plan and set up the correct order of machining operations
2. Adjust speed, feed, and other controls on the machine
3. Use special attachments to the machines
4. Use precision instruments such as micrometers and calipers to make sure there is no error in the work
5. Select cutting and lubricating oils used to cool metal and tools during machining operations



WHAT SHOULD PRODUCTION MACHINE OPERATORS BE LIKE?

**THEY SHOULD BE:**

1. Mechanically inclined
2. Precise in their work
3. Dependable

**THEY SHOULD HAVE:**

1. Good eye-hand coordination
2. A concern for detail
3. Normal vision
4. Ability to use tools

**THEY SHOULD BE ABLE TO:**

1. Stand for long periods of time
2. Do extremely accurate work
3. Concentrate on details for long periods of time

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are mathematics, shop courses, mechanical drawing, and English.

**AFTER HIGH SCHOOL:**

Most employers require a high school education, but no additional training. Training is usually received on the job by performing simpler tasks and learning through experience.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 production machine operators made an average salary of \$90 per week.
2. Their starting salary was \$60 per week.
3. Some production machine operators earned as much as \$120 a week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Most machine shops are relatively clean and well lighted.
2. The work is usually not strenuous.
3. Most of the machines have shields to protect the workers from injury.
4. Employees are usually required to wear safety goggles to prevent injuries from flying metal chips.

WHERE IN UTAH WILL YOU WORK?

GEOGRAPHICAL LOCATION:

The majority of Utah production machine operators work in the five-county Wasatch Front area surrounding Salt Lake City, Ogden, and Provo.

TYPE OF INDUSTRY:

Most production machine operators work in the metal working industries which produce fabricated metal products. Others work in shops that repair metal products.

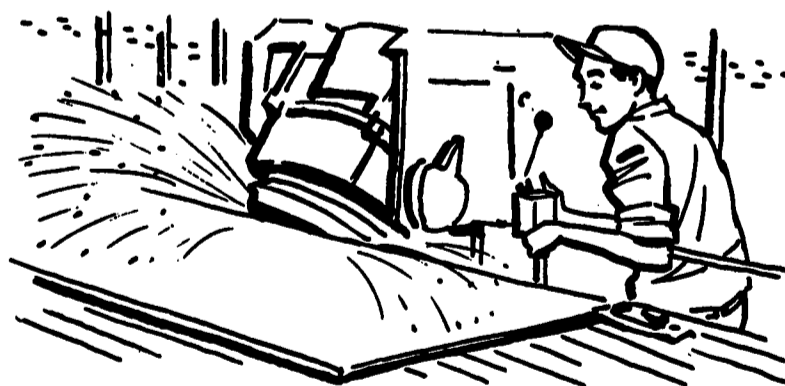
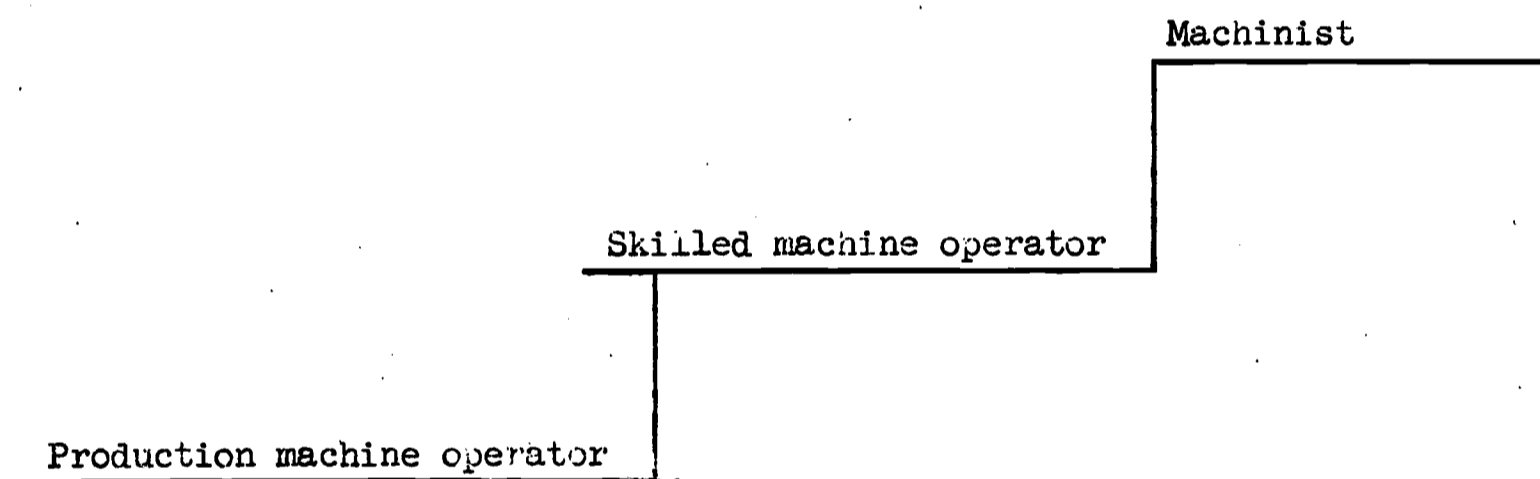
Vocational Information For Education and Work

Production Machine Operator - DOT Code 609.885  
(July 67)

IS THERE A NEED FOR PRODUCTION MACHINE OPERATORS?

1. In 1965 there were 425 production machine operators in Utah. It is predicted that by 1970 this number will increase to 433.
2. Due to the introduction of automatic equipment, opportunities for production machine operators with less skill are not expected to increase very rapidly.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



YOU ARE A RADIO AND TELEVISION  
ANNOUNCER

WHAT DO RADIO AND TELEVISION ANNOUNCERS DO?

THEY:

1. Act as masters of ceremonies during the broadcast of radio and television programs by introducing the program to the audience by reading prepared lines, reciting memorized script, or "ad libbing."
2. Announce the identification of the station at scheduled times.
3. Give commercials that may be read, recited from memory, or played on a tape.
4. May act as disc jockey by playing records and commenting on matters of interest to the audience. Disc jockeys "ad lib" much of the time, working without a detailed script.
5. Must see that the program they are announcing runs smoothly, and that there are no pauses or gaps in the smoothness of the program's sounds.

THEY MAY ALSO:

1. Do one specific type of announcing such as sports casting, weather, or news.
2. Record tapes for commercials, edit news for another announcer or prepare for future programs.
3. Work for a fixed period of time as a free-lance announcer.
4. Make minor repairs when the equipment breaks down.

WHAT SHOULD RADIO AND TELEVISION ANNOUNCERS BE LIKE?

## THEY SHOULD BE:

1. Pleasant
2. Outgoing
3. Imaginative
4. Well organized
5. Punctual at meeting deadlines

## THEY SHOULD HAVE:

1. Good judgment
2. A pleasant voice
3. A well-groomed appearance
4. A liking for people
5. Enthusiasm

## THEY SHOULD BE ABLE TO:

1. Use correct English
2. Do routine tasks with enthusiasm
3. Express themselves clearly
4. Work well with others

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are speech, drama, journalism, debate, music social sciences, and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is essential.
2. Competition for positions is keen. Opportunities are better in radio announcing than in television. Most announcers start on a part-time basis.
3. College education in speech, journalism, and communications is very helpful in obtaining a job.
4. Most employers require that the applicant have a license to operate a short wave radio transmitter. The Federal Communications Commission grants these licenses to those who pass the test.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary range for radio and television announcers in Utah was from \$500 to \$800 per month.
2. Their starting salary was from \$350 to \$400 per month.
5. Some radio and television announcers earned as much as \$1000 per month.

WHAT ARE WORKING CONDITIONS LIKE?

1. Announcers may work evenings, holidays, and weekends.
2. Working surroundings are generally pleasant.
3. Most announcers enjoy the public contact work they do.
4. Sometimes there is tension involved in the work.
5. Announcers may receive satisfaction from being well-known in the community.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

The majority of radio and television announcers in Utah work in the Salt Lake-Ogden area. Opportunities for radio announcers are found in various cities throughout the state.

**TYPE OF INDUSTRY:**

Radio and television stations employ announcers.

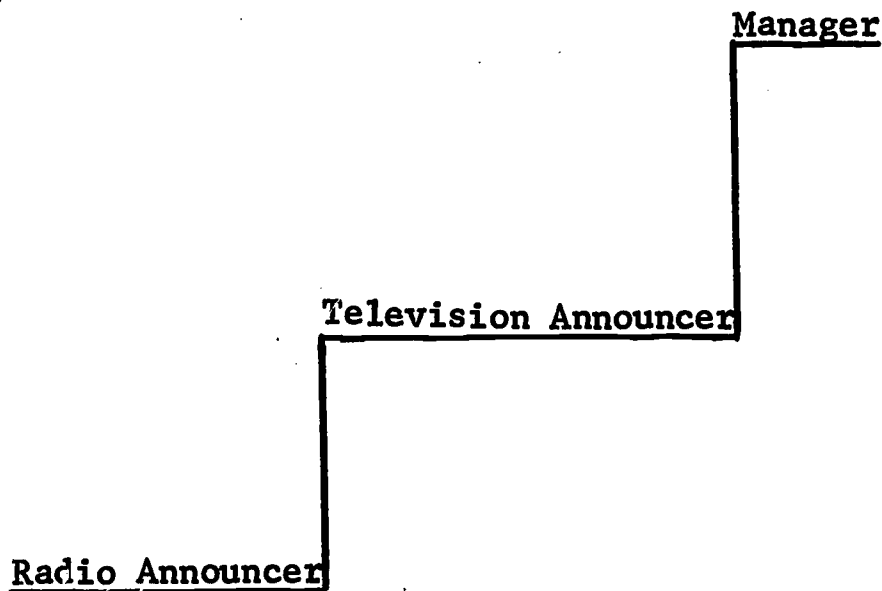
**Vocational Information For Education and Work**

Radio and Television Announcer - DOT Code 159.148  
(July 1967)

IS THERE A NEED FOR RADIO AND TELEVISION ANNOUNCERS?

In 1965 there were 224 radio and television announcers in Utah. It is predicted that by 1970 this number will increase to 234.

CAN YOU ADVANCE?



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Utah State Board of Education  
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**YOU ARE A RAILROAD CAR REPAIRMAN****WHAT DO RAILROAD CAR REPAIRMEN DO?**

**THEY REPAIR AND REBUILD DAMAGED AND WORN RAILROAD FREIGHT CARS, PASSENGER CARS, AND LOCOMOTIVES.**

**THEY:**

1. Repair and rebuild wooden sections such as floors and walls and steel sections such as side posts, panels and piping
2. Inspect locomotive and car parts such as wheels, brakes, axels, air hoses, wheel bearings, etc.
3. Replace or repair any defective part they may find while making their inspection
4. Replace or repair worn floor coverings, seats, cushions, and other upholstery in passenger cars.

**THEY DO THE MAINTENANCE WORK ON RAILROAD FREIGHT CARS, PASSENGER CARS, AND LOCOMOTIVES.**

**THEY:**

1. Paint floors and walls
2. Grease and oil all moving parts
3. Straighten metal parts that have been bent
4. Straighten the sides of freight cars that have been dented

**THEY MUST DO MANY OF THE SAME THINGS THAT CARPENTERS, PLUMBERS, PAINTERS, MECHANICS AND UPHOLSTERERS DO.**



WHAT SHOULD RAILROAD CAR REPAIRMEN BE LIKE?

## THEY SHOULD BE:

1. Agile
2. Strong and in good physical condition
3. Mechanically inclined
4. Energetic

## THEY SHOULD HAVE:

1. Good finger and hand coordination
2. Good judgment of size and distance
3. An ability to work with tools and machines
4. Full use of hands and legs

## THEY SHOULD BE ABLE TO:

1. Use basic arithmetic to solve problems
2. Handle and lift heavy equipment
3. Do some strenuous work
4. Find mechanical problems quickly
5. Work in awkward and cramped positions

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are shop, auto mechanics, industrial arts, carpentry, and mathematics.

## AFTER HIGH SCHOOL:

1. The best way to become a fully qualified railroad car repairman is to train for four years as an apprentice. During this time you will receive supervised on-the-job training and related classroom instruction.
2. Some workers learn the trade informally as helpers. A helper who has had on-the-job experience may train as a helper-apprentice for a period of three years.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for railroad car repairmen in Utah was from \$3.00 - \$3.25 an hour.
2. The average pay for helper-apprentices was \$2.75 an hour.
3. The average pay for apprentices was \$2.50 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Unlike most railroad workers, railroad car repairmen generally work a regular shift. However, a few must be employed around the clock for emergency repair work.
2. Most repairs are made indoors in the engine house or in the car repair shop. Minor adjustments, inspections, and emergency repairs may be performed outdoors in all kinds of weather.
3. There is danger of small injuries such as cuts, bruises, and burns.
4. Car repair shops are generally quite noisy.
5. You will have to tolerate working in soiled clothes and with dirty hands.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Approximately one-half of Utah's railroad car repairmen work in the Ogden area, while one-third of them work in the Salt Lake area. The remainder work in Provo and other areas.

## TYPE OF INDUSTRY:

Railroad car repairmen are employed in the railroad transportation industry by large railroad companies. Heavy manufacturing and metal refining industries, such as Kennecott and Geneva Steel hire railroad car repairmen to take care of their own private railroad cars.

**Vocational Information For Education and Work**

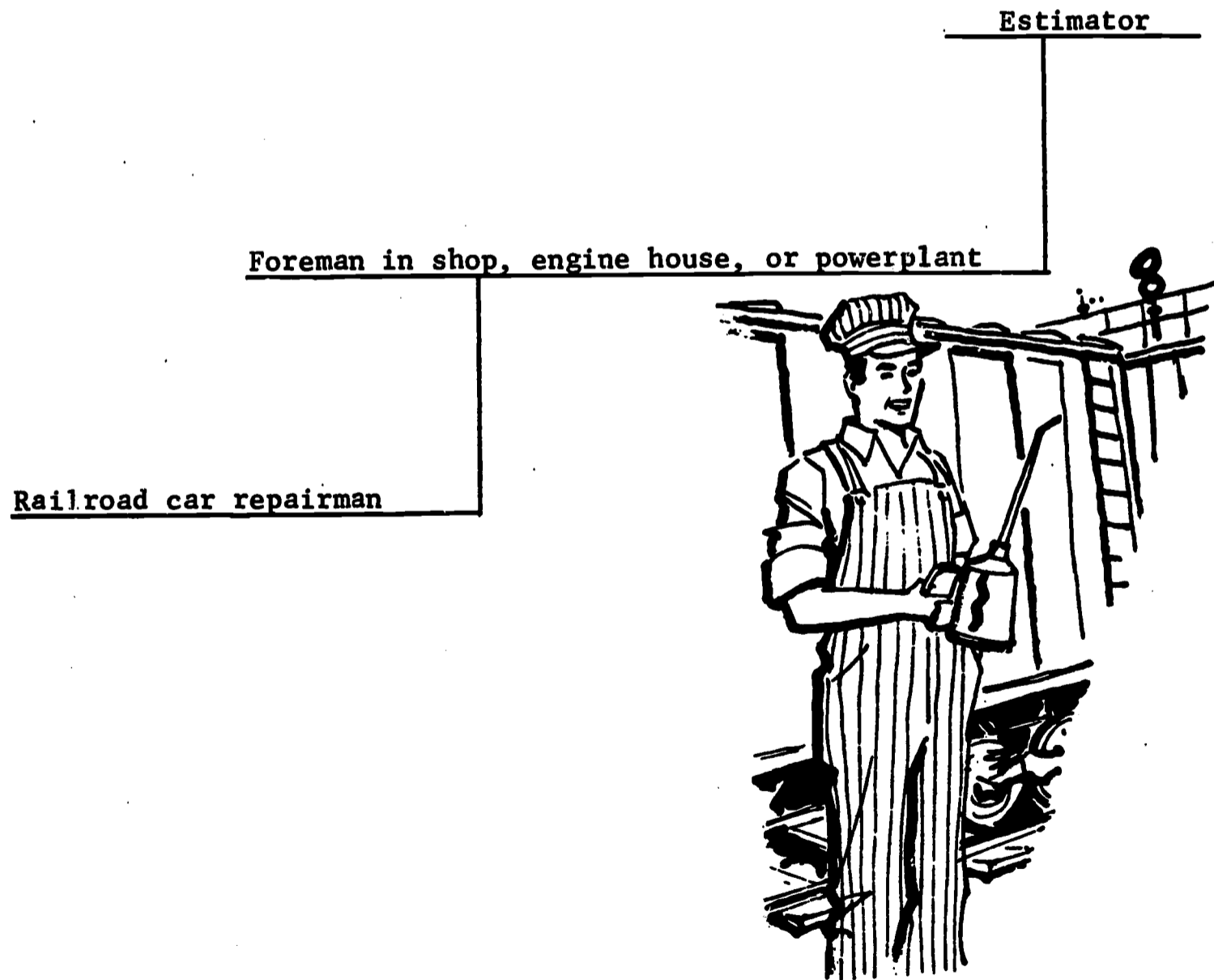
Railroad Car Repairman - DOT Code 622.381

(July 67)

IS THERE A NEED FOR RAILROAD CAR REPAIRMEN IN UTAH?

1. In 1965, there were 725 railroad car repairmen in Utah. It is predicted, that by 1970 this number will decrease to 638.
2. Like most railroad occupations, the need for railroad car repairmen has been falling in recent years because of a decrease in business experienced by railroads and also because of the development of better equipment.
3. The need for railroad car repairmen will be to replace those who quit, retire, or leave for other reasons.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



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**YOU ARE A RECEPTIONIST****WHAT DO RECEPTIONISTS DO?**

**THEY GREET CALLERS IN THE OFFICE WHERE THEY ARE EMPLOYED AND GIVE INFORMATION.**

**THEY:**

1. Greet any callers that come into the office where they are employed.
2. Take the caller's name and direct him to the person he wishes to see.
3. Make appointments for future visits.
4. Give information and directions.
5. Keep records of each caller's name and the nature of his business.

**THEY MAY ALSO:**

1. Perform general office work.
2. Sort and distribute mail.
3. Answer and place telephone calls.
4. Take messages.

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WHAT SHOULD RECEPTIONISTS BE LIKE?

THEY SHOULD BE:

1. Tactful
2. Patient
3. Pleasant
4. Punctual
5. Alert

THEY SHOULD HAVE:

1. A pleasant voice
2. A well-groomed appearance
3. Normal vision and hearing
4. A good memory

THEY SHOULD BE ABLE TO:

1. Sit for long periods of time
2. Deal with all types of people
3. Be courteous all day long
4. Do some typing

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

IN HIGH SCHOOL:

Subjects that will help you prepare for this job are spelling, business courses, arithmetic, typing, and English.

AFTER HIGH SCHOOL:

1. Most employers require a high school diploma but no further training.
2. Most employers prefer to hire receptionists who have pleasant personalities.
3. Training will be received on the job.

HOW MUCH MONEY WILL YOU MAKE?

In 1966 the average salary for receptionists in Utah was \$75 per week.

Their starting salary was \$60 per week.

Some receptionists earned as much as \$100 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Work surroundings are generally pleasant.
2. Receptionists in small offices are usually required to perform general office work.
3. The work is generally of an enjoyable nature; most receptionists enjoy meeting people.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Most receptionists work in Salt Lake, Davis, Weber, Utah, and Box Elder Counties. Opportunities are limited in other areas of the State.

**TYPE OF INDUSTRY:**

Receptionists work for manufacturing companies, real estate offices, medical and dental offices, professional offices insurance firms, radio and television studios, and for governmental agencies.

**Vocational Information For Education and Work**

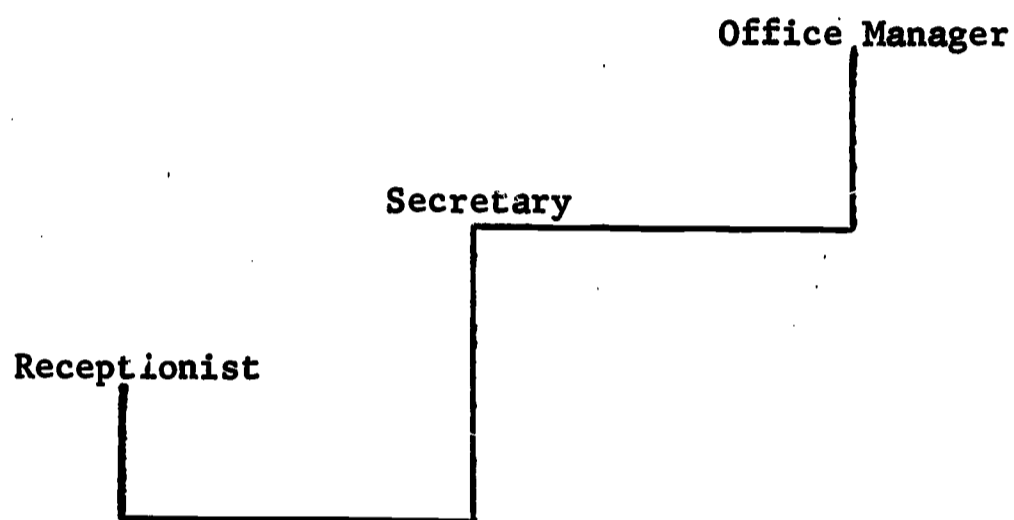
Receptionist - DOT CODE 237.368  
(July, 1967)

IS THERE A NEED FOR RECEPTIONISTS IN UTAH?

In 1965 there were 864 receptionists in Utah. It is predicted that by 1970, this number will increase to 1299.

There is a great demand for receptionists who can do other clerical work.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



**YOU ARE A NEWSPAPER REPORTER.****WHAT DO REPORTERS DO?****THEY:**

1. Are given simpler writing tasks to begin with, such as summarizing a speech, covering a civic or club meeting, or reporting a social event.
2. Frequently have areas that they visit daily such as police stations or courts to gather news.
3. Are often assigned to write a series of feature articles about subjects of local interest such as elections, court trials, new building projects, or other subjects.
4. May write a story from seeing it personally or may interview eye witnesses to get the information.

**THEY MAY ALSO:**

1. Specialize in reporting on a particular subject such as medicine, politics, science, or education; reporters who specialize usually analyze and interpret the news in their stories.
2. Be assigned to live in a foreign country to report news; these reporters are known as foreign correspondents.
3. Take photographs, write headlines, write editorials, sell advertising, or perform general office work.

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WHAT SHOULD NEWSPAPER REPORTERS BE LIKE?

## THEY SHOULD BE:

1. Precise in their work
2. Resourceful
3. Patient and persistent
4. Out-going

## THEY SHOULD HAVE:

1. A concern for accuracy
2. Initiative
3. Normal vision
4. A well-groomed appearance

## THEY SHOULD BE ABLE TO:

1. Work rapidly and accurately
2. Work under pressure
3. Concentrate on details
4. Associate with all kinds of people

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are speech, journalism, social studies, history, typing and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is required.
2. Some employers hire talented writers who have no college education, but some college training is generally required.
3. Some reporters start as copy boys or office boys and then become reporters.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1965 the average salary for newspaper reporters in Utah was \$125 per week.
2. Their starting salary was \$75 per week.
3. Some reporters earned as much as \$150 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions vary from working at a desk to on-the-scene reporting of a story.
2. Reporters who work for morning papers usually start work in the afternoon and finish at midnight or later.
3. There is usually a great deal of variety in this work.
4. There may be pressure involved in meeting a deadline to get a story written on time.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

The majority of the newspaper reporters in Utah work in and around Salt Lake City, Ogden, and Provo. Opportunities are found in larger cities throughout the state.

**TYPE OF INDUSTRY:**

Newspaper reporters work for newspapers.

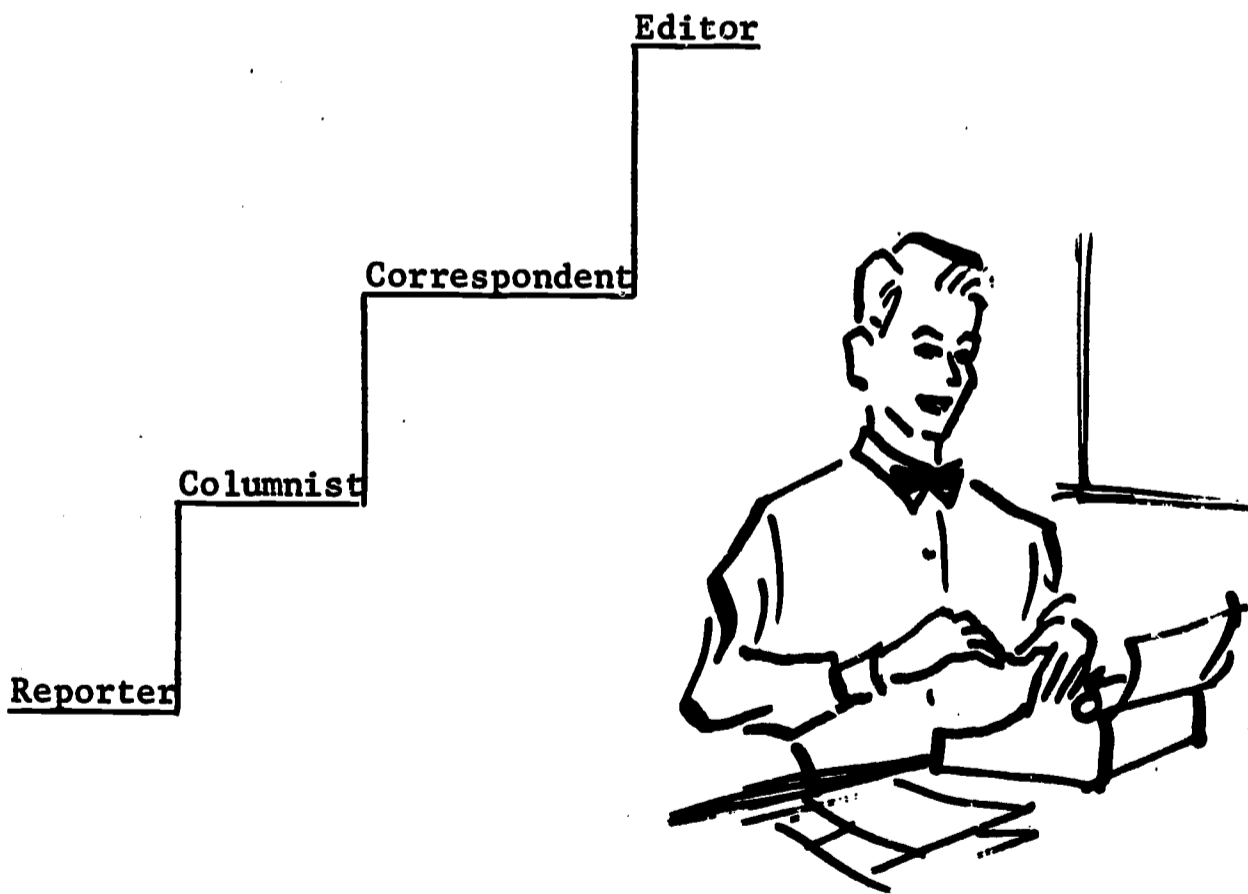
**Vocational Information For Education and Work**

Newspaper Reporter - DOT Code 132.286  
(July 1967)

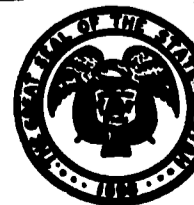
IS THERE A NEED FOR NEWSPAPER REPORTERS IN UTAH?

In 1965 there were 200 reporters in Utah. It is predicted that by 1970 this number will increase to 275.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
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## YOU ARE A ROOFER

WHAT DO ROOFERS DO?

THEY COVER ROOFS WITH ROOFING MATERIALS TO MAKE THEM WATERPROOF.

THEY:

1. Nail or staple strips of felt paper onto the roof to form a base
2. Spread hot tar or asphalt over the felt roofing paper
3. Repeat this process until at least three layers of felt paper are in place
4. Apply a final surface of tar and asphalt, gravel, or pebbles, using a rake or broom

THEY APPLY OTHER TYPES OF ROOFING SUCH AS ROLL ROOFING AND ASPHALT SHINGLES.

THEY:

1. Overlap the roofing material then fasten it to the roof with nails or asphalt cement
2. Cut the material to fit corners, pipes, and chimneys
3. Nail or cement strips of metal wherever two roof surfaces join together, to make the joints watertight

THEY APPLY MORE EXPENSIVE TYPES OF ROOFS SUCH AS METAL TILE AND SLATE.

THEY:

1. Place a covering of roofing felt over the roof
2. Punch holes in the slate or tile then nail them in overlapping rows onto the roof
3. Cover the nailheads with roofing cement
4. Solder metal sheets together and nail them to the roof

THEY MAY ALSO DO WATERPROOFING ON STRUCTURES OTHER THAN ROOFS SUCH AS BRICKWORK, CONCRETE WALLS, SWIMMING POOLS, ETC.

WHAT SHOULD ROOFERS BE LIKE?

## THEY SHOULD BE:

1. Agile
2. In good physical condition
3. Mechanically inclined

## THEY SHOULD HAVE:

1. A good sense of balance
2. Good hand and body coordination
3. Good judgment of size & distance

## THEY SHOULD BE ABLE TO:

1. Do strenuous work
2. Climb, balance, stoop, bend, and kneel
3. Stand for long periods of time
4. Work well alone or with others

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are mathematics, blueprint reading, shop, drafting, and woodwork.

## AFTER HIGH SCHOOL:

1. The best way to become a fully qualified roofer is to train for three years as an apprentice. During this time you will receive supervised on-the-job training and related classroom instruction.
2. Some workers learn the trade informally as helpers. They do not advance as fast as the apprentice.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the union wage for roofers in construction was \$4.10 an hour. Some earned as much as \$4.25 an hour.
2. Roofers doing repair and maintenance work earn less than roofers in construction but are not subject to lay offs during the bad winter months.
3. The starting pay for apprentices was \$2.90 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. You may have to work outdoors in all kinds of weather.
2. There is a risk of slipping or falling from scaffolding or from roofs.
3. Roofing is medium hard work involving quite a bit of climbing.
4. Contact with heat, fumes, and odors is common when working with tar.
5. You will have to tolerate working with dirt and tar on your hands and clothing.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

80% of Utah's roofers work in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake, and Utah counties. However, they may travel throughout the state to different construction sites.

## TYPE OF INDUSTRY:

Most roofers work for roofing contractors in the construction industry. Others do building maintenance and repair work, work for roofing companies that do their own construction and repair work, or work for themselves doing small roofing jobs.

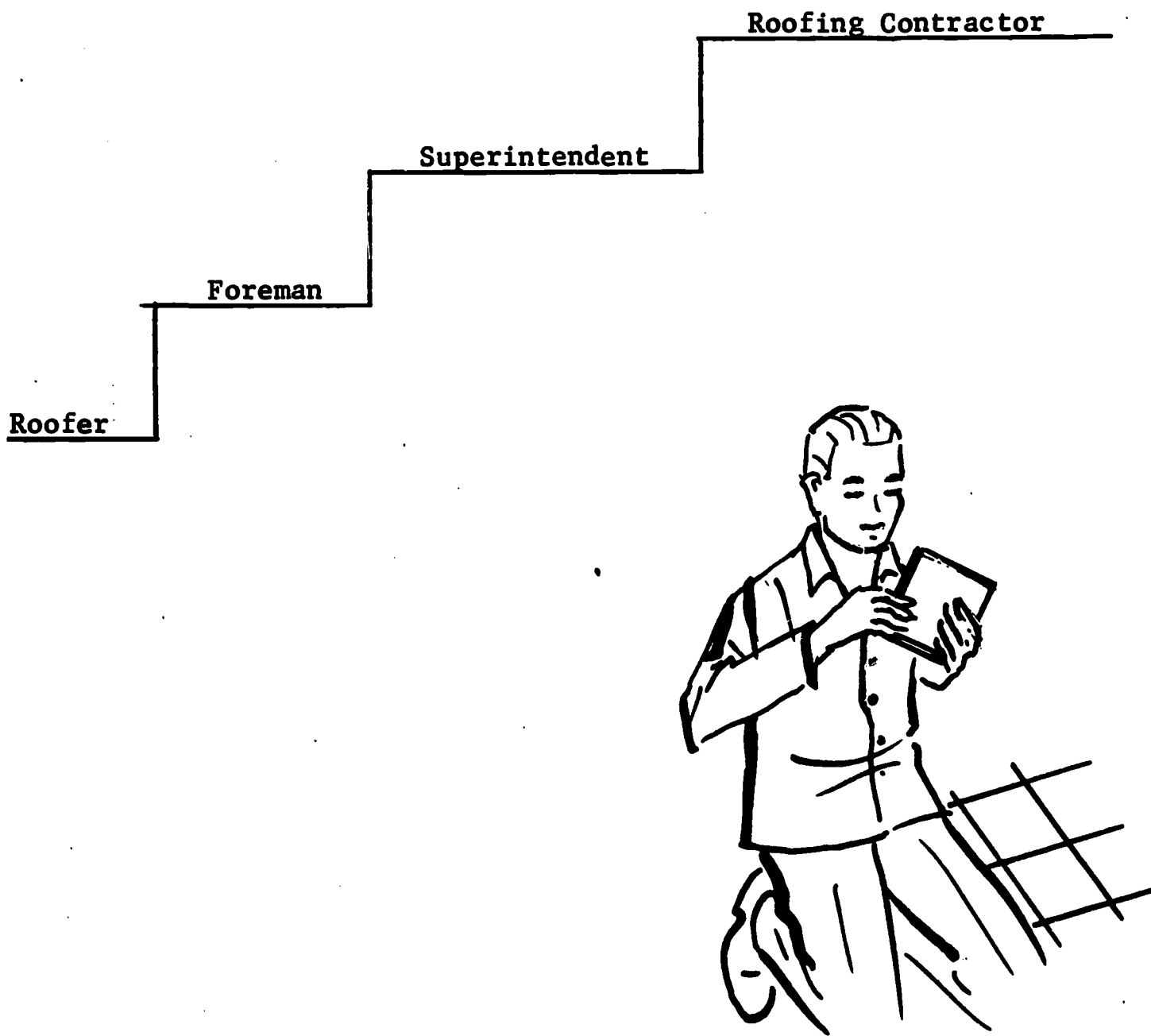
Vocational Information For Education and Work

Roofer - DOT Code 866.381  
(July 67)

IS THERE A NEED FOR ROOFERS IN UTAH?

1. In 1965, there were 339 roofers in Utah. It is predicted, that by 1970, this number will increase to 417.
2. The need for roofers will continue to rise as the construction industry grows. It is predicted that Utah's construction industry will continue to grow in the next five years.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**Y O U A R E A R O U T E M A N****WHAT DO ROUTEMEN DO?**

**THEY DRIVE TRUCKS OVER ESTABLISHED ROUTES TO DELIVER PRODUCTS TO INDIVIDUAL CUSTOMERS OR TO RETAIL ESTABLISHMENTS.**

**THEY:**

1. Load or supervise the loading of their trucks before they begin their routes.
2. Deliver merchandise that has been previously ordered and take orders for merchandise that will be delivered in the future.
3. Sell goods along the way.
4. Collect payments and keep records of their transaction.
5. Unload their trucks after returning to the plant.

**THEY MAY ALSO:**

1. Take care of customers' complaints.
2. Attempt to locate new customers along the route.
3. Prepare lists of the products they plan to deliver.
4. Take care of the maintenance of their trucks.
5. Deliver different types of products such as baked goods, laundry and dry cleaning, dairy products, auto supplies, foods and beverages, and others.



WHAT SHOULD ROUTEMEN BE LIKE?

## THEY SHOULD BE:

1. Well mannered
2. Friendly
3. Energetic
4. Dependable

## THEY SHOULD HAVE:

1. A pleasant voice
2. A neat appearance
3. Sales ability
4. A liking for people
5. Self confidence

THEY SHOULD BE ABLE TO:

1. Do simple arithmetic
2. Work without close supervision
3. Get along well with others
4. Keep simple records

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are speech, arithmetic, business courses, driver training, salesmanship, and English.

## AFTER HIGH SCHOOL:

1. Most employers require a high school diploma.
2. Experience as a sales clerk or other selling job is helpful in obtaining a position.
3. Some employers have routemen helpers to work with the regular routeman. Helpers are given routes of their own after receiving on-the-job experience.
4. Many employers hire routemen who do not have any experience.

HOW MUCH MONEY WILL YOU MAKE?

1. Most routemen receive a salary plus a commission on the goods they sell. In 1966 routemen in Utah earned from \$90 to \$140 per week.
2. Their starting wage was from \$80 to \$100 per week.
3. Some routemen earned as much as \$250 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. The number of hours of work each week may range from 30 - 60.
2. Route sales may vary from season to season. Weather conditions also affect sales.
3. There may be unusual hours involved in the work.
4. The routeman is usually his own supervisor.
5. There may be a great deal of lifting, carrying, and walking involved in the work.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Most routemen in Utah work in Salt Lake, Davis, Weber, Utah, and Box Elder Counties.

**TYPE OF INDUSTRY:**

Bakeries, laundries and dry cleaners, auto parts companies, candy and tobacco companies, and many other companies employ routemen.

**Vocational Information For Education and Work**

Routeman - DOT Code 292.398

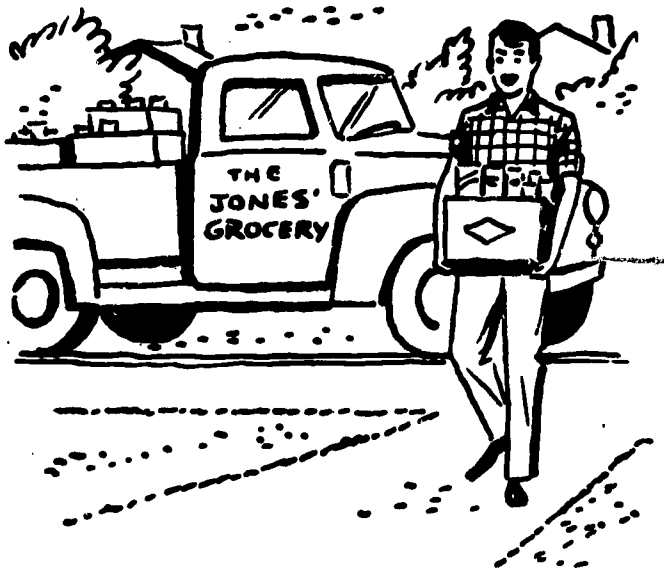
(July 1967)

IS THERE A NEED FOR ROUTEMEN IN UTAH?

- 1. In 1965 there were 950 routemen in Utah. It is predicted that by 1970 this number will increase to 1000.

CAN YOU ADVANCE?

Most routemen do not advance to different jobs, but earn more money as they gain experience.



Sales Supervisor

Routeman (Retail Route)

Routeman (Retail Route)

**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



## YOU ARE A SALES CLERK

WHAT DO SALES CLERKS DO?

## THEY:

1. Show merchandise to customers and help them make a selection
2. Make out sales or charge slips, receive cash, give change, and bag the customer's purchase. (In some places a cashier takes care of all this.)
3. Keep the merchandise neatly arranged and in its proper place
4. Re-stock shelves and counters as merchandise is sold
5. Dust and clean the shelves and counters

## THEY MAY ALSO:

1. Watch for shoplifters
2. Set up displays
3. Demonstrate merchandise
4. Suggest additional items for sale

## IF THEY WORK IN A SMALLER STORE THEIR DUTIES MAY INCLUDE:

1. Keeping a record of what has been sold
2. Taking inventory
3. Marking price tags

WHAT SHOULD SALES CLERKS BE LIKE?

## THEY SHOULD BE:

1. Courteous
2. Efficient
3. Honest
4. Neat and well-dressed
5. Cooperative
6. Tactful
7. Patient

## THEY SHOULD HAVE:

1. Normal hearing and vision
2. A pleasing personality

## THEY SHOULD BE ABLE TO:

1. Stand for long periods of time
2. Use basic arithmetic
3. Meet and deal with the public

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are merchandising, English, speech, basic arithmetic, salesmanship, and other distributive education subjects.

## AFTER HIGH SCHOOL:

1. Although a high school diploma is not absolutely necessary, most employers prefer to hire graduates. No additional schooling is required.
2. You will receive your training on the job and in special sales classes offered by your employer.
3. Employers like to hire people who have had some experience. Part time work during the summer and Christmas seasons is helpful in gaining a job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, sales clerks in Utah made from \$1.25-\$1.75 an hour. Some sales clerks receive a commission for selling certain items. Some receive a bonus after selling a certain quota.
2. Their starting salary was \$1.25 an hour or lower.

WHAT ARE WORKING CONDITIONS LIKE?

1. Retail and variety stores that serve the public are generally very pleasant places to work.
2. You will be standing all day long on the open floor or behind a counter.
3. You will have to do some lifting, stooping, and bending.
4. There is often music as well as noise continually in the air.
5. You will probably have to work some evenings and Saturdays (and in some places on Sundays) taking another day of the week off.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Every community in Utah employs sales clerks. Most opportunities, however, are located in the larger cities.

## TYPE OF INDUSTRY:

Large department and variety stores, small independent clothing, accessory, novelty, and gift stores, and drug stores, employ almost all sales clerks.

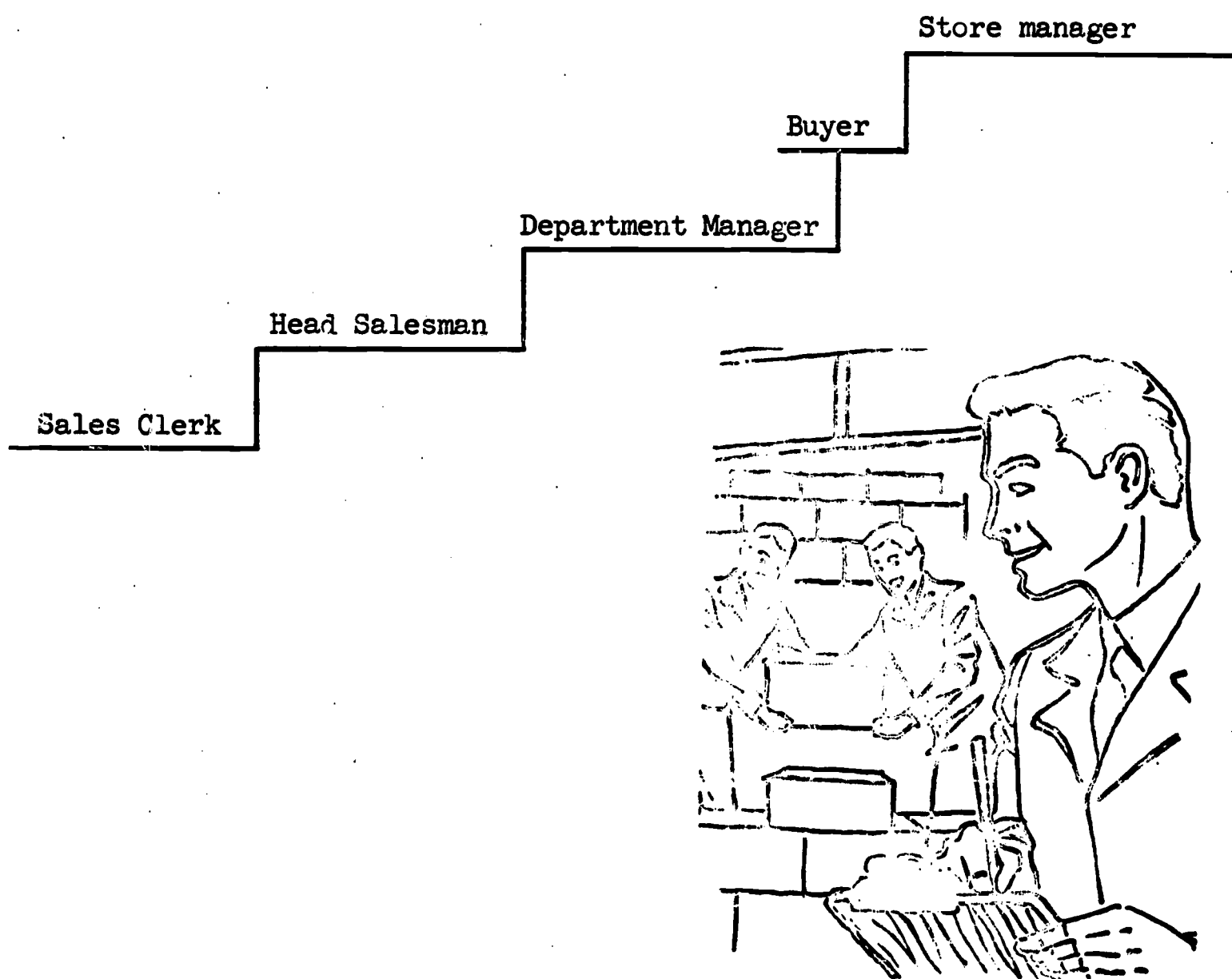
**Vocational Information For Education and Work**

Sales Clerk - DOT Code 290.478  
(July 67)

IS THERE A NEED FOR SALES CLERKS IN UTAH?

1. In 1965, there were 3,801 sales clerks in Utah. It is predicted that by 1970, this number will increase to 4,657.
2. There is a high degree of turnover in this field due to many who leave to marry or raise a family.
3. Most employees in this field are women.

CAN YOU ADVANCE?



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Utah State Board of Education  
Utah State Department of Employment Security**



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YOU ARE A SALESPERSON

WHAT DO SALESPEOPLE DO?

THEY SHOW, DESCRIBE, AND SELL A VARIETY OF MERCHANDISE TO CUSTOMERS IN RETAIL STORES.

THEY:

1. Greet customers in a friendly manner and offer to help them
2. Create an interest in the merchandise the store has to offer and find out the kind and style of merchandise the customer has in mind
3. Show customers the article they are interested in and demonstrate its uses
4. Tell customers about its features, advantages, and price and try to stimulate their desire to buy by emphasizing the points that will satisfy their needs
5. Answer the customer's questions and help him to make his choice
6. Total the amount of the sale and ring it on the cash register, write up a sales ticket, or fill out a customer's contract for the customer to sign
7. Accept checks, make change, and give receipts.

THEY MAY ALSO:

1. Order needed merchandise from stockrooms or warehouses
2. Keep merchandise records
3. Take inventory and prepare displays

MOST SALESPEOPLE SPECIALIZE IN THE KIND OF MERCHANDISE THEY SELL SUCH AS FURNITURE, APPLIANCES, CLOTHING, JEWELRY, AUTOMOBILES, COSMETICS, HARDWARE, ETC.

SPECIAL KNOWLEDGE OR SKILLS ARE GENERALLY NEEDED TO SELL A SPECIFIC KIND OF MERCHANDISE.



WHAT SHOULD SALESPEOPLE BE LIKE?

**THEY SHOULD BE:**

1. Courteous
2. Efficient
3. Tactful
4. Cheerful
5. Outgoing
6. Patient

**THEY SHOULD HAVE:**

1. A pleasing personality
2. A neat appearance
3. Self confidence
4. Good hearing
5. Stable emotions
6. A liking for people

**THEY SHOULD BE ABLE TO:**

1. Communicate clearly
2. Stand for long periods of time
3. Get along well with people
4. Treat customers in a friendly, courteous manner even when they are rude.

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are salesmanship, commercial arithmetic, English, speech, and psychology.

**AFTER HIGH SCHOOL:**

1. Most employers require a high school diploma but no additional schooling. You will receive your training on the job.
2. Experience in saleswork is important in finding a job. Most salespeople start out in retail department stores. Two or three years of selling experience are often required of new car, furniture and appliance salesmen.
3. Although natural sales ability is the most important quality for advancement, courses in marketing and selling, offered at any of Utah's colleges, junior colleges, and technical colleges, will help you find better positions.

HOW MUCH MONEY WILL YOU MAKE?

1. Your salary will depend upon the type of article you sell and your ability to sell. Most salespeople receive a certain percentage of their sales called a commission.
2. Automobile, furniture, and large appliance salesmen earn from \$500 - \$900 a month depending upon their sales ability. The best salesmen may make as much as \$1,200 a month.
3. Salespeople in retail stores earn from \$300 - \$600 a month depending upon their sales ability and regular customers. Some salespeople of better merchandise may make as much as \$1,000 a month.
4. In probably no other field, not requiring a college education, can a person advance as fast or earn as much, if he has a "knack" for selling, as he can in sales work.

WHAT ARE WORKING CONDITIONS LIKE?

1. Salespeople generally work in clean, well-lighted places. Some salesmen, such as used car salesmen work in outdoor lots. Others may travel to the customer's home or go from door to door.
2. Salespeople almost always work Saturdays, taking their day off during the week, and often work late in evenings.
3. You will spend practically the entire day on your feet.
4. Selling can be very competitive and also discouraging at times.

WHERE IN UTAH WILL YOU WORK?

1. Retail stores, including large department stores, which sell furniture, household appliances, hardware, shoes and clothing, and automobile sales places employ the majority of salespeople.
2. Sales jobs are found in practically every community in the state.

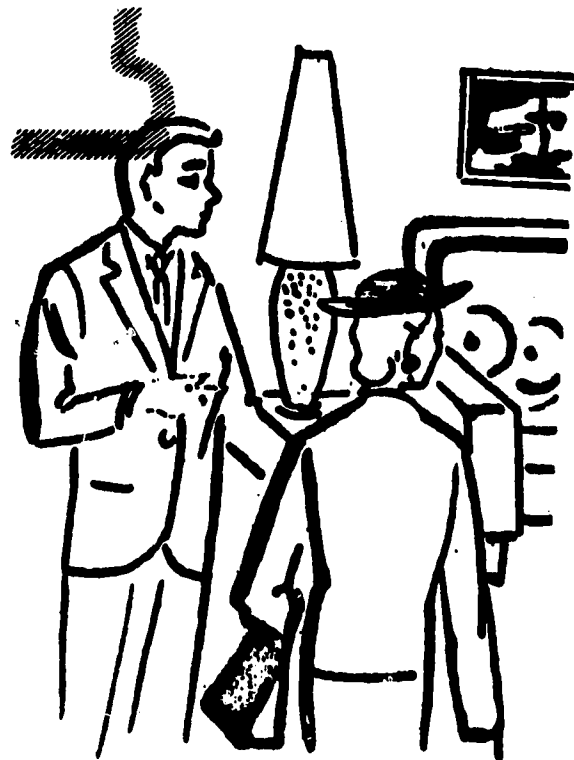
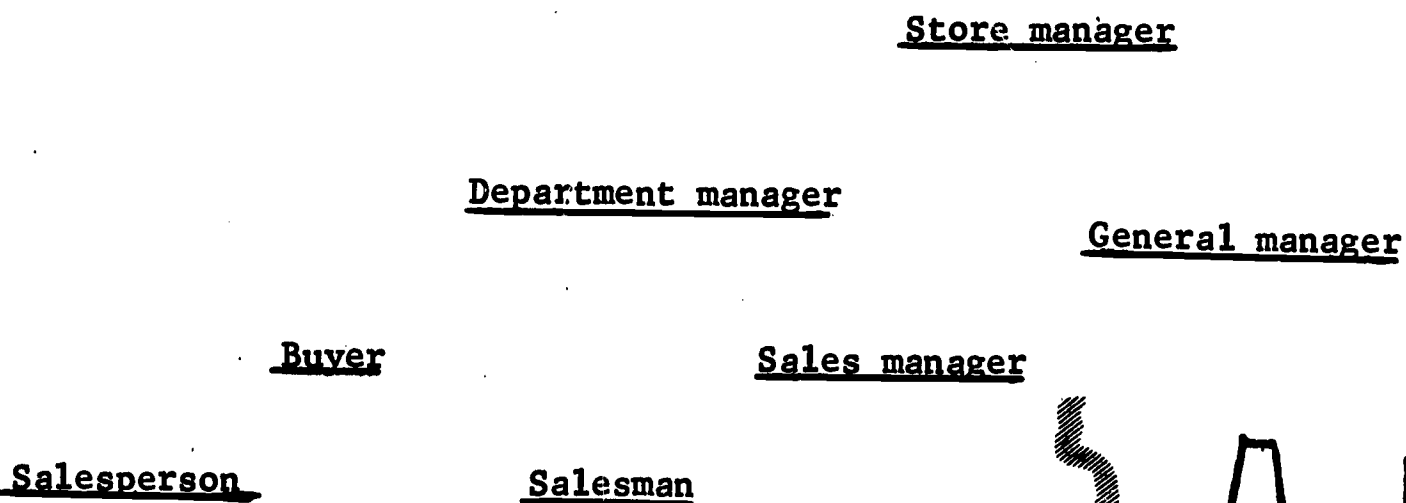
Vocational Information For Education and Work

Salesperson - DOT Code 260 to 290.068  
(July 67)

IS THERE A NEED FOR SALESPEOPLE IN UTAH?

1. In 1965, there were 6,115 salespeople in Utah. It is predicted, that by 1970, this number will increase to 7,045.
2. The need for salespeople will continue to increase as the population and economy continue to grow.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## Y O U   A R E   A   S E A M S T R E S S

WHAT DO SEAMSTRESSES DO?

THEY PERFORM ALL SEWING OPERATIONS NECESSARY TO PUT TOGETHER OR TO REPAIR ARTICLES MADE OF TEXTILES OR OTHER FABRICS.

## THEY:

1. Usually operate a sewing machine, but may do some sewing by hand.
2. Stitch rips and tears in clothing to be repaired.
3. Darn small holes and reinforce weakened areas by patching or darning.
4. Replace missing buttons.
5. Must make repairs which do not show on the garment.

## THEY MAY ALSO:

1. Prepare estimates of the cost of the repairs to be done.
2. Repair items other than clothing such as draperies or chair cushions.
3. Replace worn pockets or damaged zippers.
4. Make alterations on clothing.

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WHAT SHOULD SEAMSTRESSES BE LIKE?

## THEY SHOULD BE:

1. Precise in their work
2. Neat
3. Fast
4. Dependable

## THEY SHOULD HAVE:

1. Good eyesight
2. Good finger coordination
3. Skillful hands
4. A concern for detail

## THEY SHOULD BE ABLE TO:

1. Work rapidly and accurately
2. Sit for long periods of time
3. Work well without close supervision
4. Acquire new sewing skills

(For a detailed description of your capabilities see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are home economics, sewing, and English.

## AFTER HIGH SCHOOL:

1. There are no specific educational requirements for employment as a seamstress.
2. Most seamstresses have acquired their skills by sewing in their own home.
3. Most Utah colleges and junior colleges offer home economics courses involving sewing.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average wage for seamstresses in Utah was \$1.75 per hour.
2. Their starting wage was \$1.40 per hour.
3. Some seamstresses earned as much as \$2.25 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. In small establishments the seamstress may work in a corner of a room in which other operations are going on.
2. Large establishments may have a special sewing room.
3. Fumes, heat, and steam are present in dry cleaning plants.
4. Seamstresses work only on previously laundered or cleaned items.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

About 90% of the seamstresses in Utah work in Box Elder, Davis, Salt Lake, Utah, and Weber Counties. There are a few openings in other areas of the state.

## TYPE OF INDUSTRY:

Hotels, linen service firms, laundry and dry cleaning plants, hospitals, and governmental agencies employ seamstresses.

**Vocational Information For Education and Work**

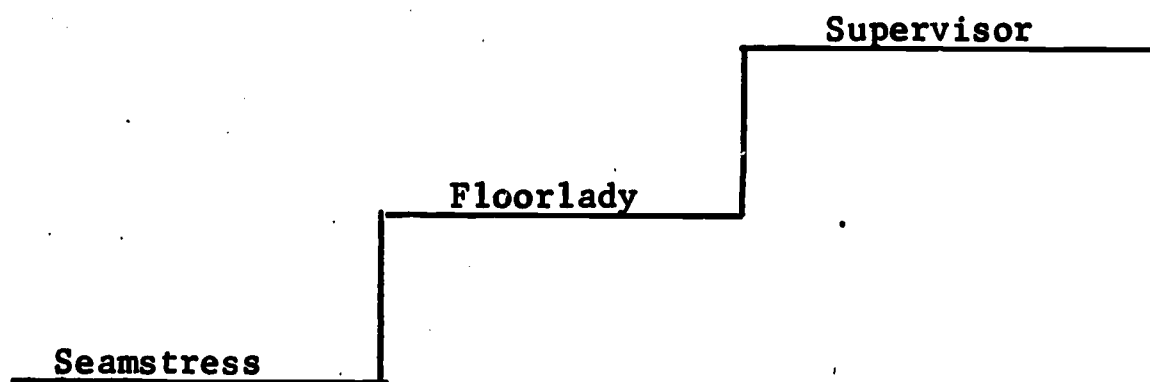
Seamstress - DOT Code 785.381  
(July 67)

IS THERE A NEED FOR SEAMSTRESSES IN UTAH?

1. In 1965 there were 245 seamstresses in Utah. It is predicted that by 1970 this number will increase to 290.

CAN YOU ADVANCE?

Advancement possibilities are found only in larger establishments.



**Prepared Cooperatively By:  
Utah State Board of Education  
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**Y O U A R E A S E C R E T A R Y****WHAT DO SECRETARIES DO?**

**THEY ARE RESPONSIBLE FOR PERFORMING THE MANY DUTIES THAT KEEP AN OFFICE FUNCTIONING SMOOTHLY.**

**THEY:**

1. Take care of incoming mail
2. Answer letters when so directed
3. Schedule the employer's business appointments
4. Type various materials
5. Answer the telephone
6. Take dictation.

**THEY MAY ALSO:**

1. Do general filing
2. Supervise other workers
3. Take care of their employer's bookkeeping
4. Specialize in medical, legal, or other secretarial work
5. Take care of the payroll
6. Greet office visitors.

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WHAT SHOULD SECRETARIES BE LIKE?

## THEY SHOULD BE:

1. Polite
2. Accurate
3. Resourceful
4. Dependable
5. Well groomed

## THEY SHOULD HAVE:

1. A concern for detail
2. Good judgment
3. Good finger coordination
4. Clerical aptitude
5. A good memory

THEY SHOULD BE ABLE TO:

1. Work rapidly and accurately
2. Use correct grammar
3. Sit for long periods of time
4. Work well in spite of interruptions
5. Type well and take shorthand

(For a detailed description of your capabilities, see your counselor)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are shorthand, typing, business courses, arithmetic, and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is usually required
2. Most employers prefer to hire secretaries who have done work such as typing, stenography, filing, and other office work.
3. Secretarial training is available at all of Utah's colleges and junior colleges and at private business schools. Employers prefer to hire secretaries who have received instruction at these schools.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for secretaries in Utah was \$350 per month.
2. Their starting salary was from \$250 to \$300 per month.
3. Some secretaries made as much as \$450 per month.

WHAT ARE WORKING CONDITIONS LIKE?

1. Office surroundings vary from shabby to luxurious.
2. There may be pressure to meet deadlines.
3. The job may involve public contact.
4. Many tasks become monotonous after repetition.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

The majority of the secretaries in Utah work in Salt Lake, Davis, Utah and Weber counties. Opportunities are found throughout the state in the more heavily populated areas.

**TYPE OF INDUSTRY:**

Secretaries are employed by insurance, real estate, legal, medical and other types of offices, wholesale and retail companies, and state, federal and local government agencies employ secretaries.

**Vocational Information For Education and Work**

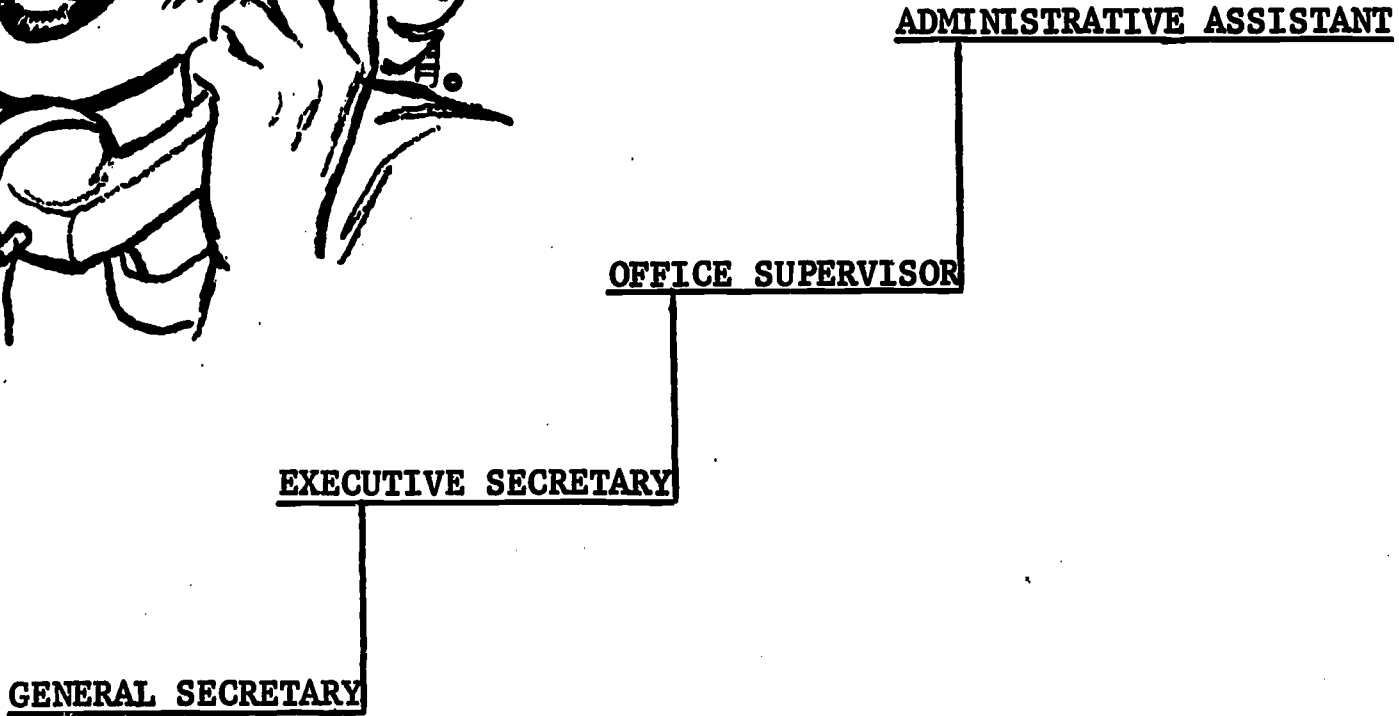
Secretary - DOT Code 201.368  
(July 1967)

IS THERE A NEED FOR SECRETARIES IN UTAH?

In 1965 there were 4760 secretaries in Utah. It is predicted that by 1970 this number will increase to 6000.

There is a great demand for qualified secretaries.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



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YOU ARE A SERVICE STATION ATTENDANT

WHAT DO SERVICE STATION ATTENDANTS DO?

THEY SERVICE CARS AND TRUCKS BY:

1. Filling the fuel tank with gas
2. Cleaning the windshield and lights
3. Receiving the customer's money and giving him the correct change or stamping the sales slip with his credit card

THEY OFFER TO CHECK:

1. Oil level
2. Water in the radiator and battery
3. Fan belts
4. Air pressure in the tires

IF ASKED, THEY WILL ALSO CHECK OTHER ITEMS AND SUGGEST REPLACEMENT WHICH THEY OFFER TO SELL AND INSTALL, SUCH AS:

1. Oil filters
2. Tires
3. Spark plugs
4. Batteries
5. Antifreeze
6. Accessories
7. Other faulty items

THEY MAY ALSO:

1. Grease cars
2. Balance wheels
3. Wash vehicles

WHAT SHOULD SERVICE STATION ATTENDANTS BE LIKE?

**THEY SHOULD BE:**

1. Friendly
2. Courteous
3. Tactful
4. Self confident
5. Neat
6. Good tempered
7. Energetic
8. Willing to serve the public
9. Mechanically inclined

**THEY SHOULD HAVE:**

1. Good physical health
2. Normal hearing and vision
3. A driver's license
4. Understanding of how an automobile works
5. Knowledge of simple arithmetic
6. Good finger coordination

**THEY SHOULD BE ABLE TO:**

1. Make change quickly and accurately and keep simple records
2. Direct people to nearby points of interest and surrounding streets
3. Stand or walk for long periods of time
4. Bend, stoop and reach easily
5. Do heavy lifting
6. Work quickly

(For a detailed description of your capabilities, see your counselor)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are auto mechanics, shop, salesmanship, business, arithmetic and business management.

**AFTER HIGH SCHOOL:**

1. Although most service station attendants are trained on the job, courses are beginning to be offered in post-secondary schools. Some students begin their training doing part-time work while they go to school.
2. In addition to on-the-job training, some oil companies give their new employees training in a company school. These training programs may last from two to eight weeks.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 service station attendants in Utah made \$300-\$450 a month, plus, in most cases, commissions from sales of tires, batteries, accessories, etc. Their salary also varied according to the location of the station.
2. Their starting salary as a full-time worker was from \$250-\$300 a month.
3. Part-time workers made from \$1.25-\$1.50 an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. You must often work in soiled clothes and with hands that are dirty and greasy.
2. You must work in and out of doors in all kinds of weather.
3. You will sometimes be required to work at nights, on weekends and holidays.
4. You might receive small injuries such as cuts, bruises, burns and shocks.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION**

Even the smallest town has a gas pump. Service stations are located in every city and town in the state and often along highways between cities. You could work in any section of the state you might desire, but obviously, there are more positions open in larger cities.

**TYPE OF INDUSTRY**

You will be working in the gas and oil industry. Most service stations are leased by large oil companies.

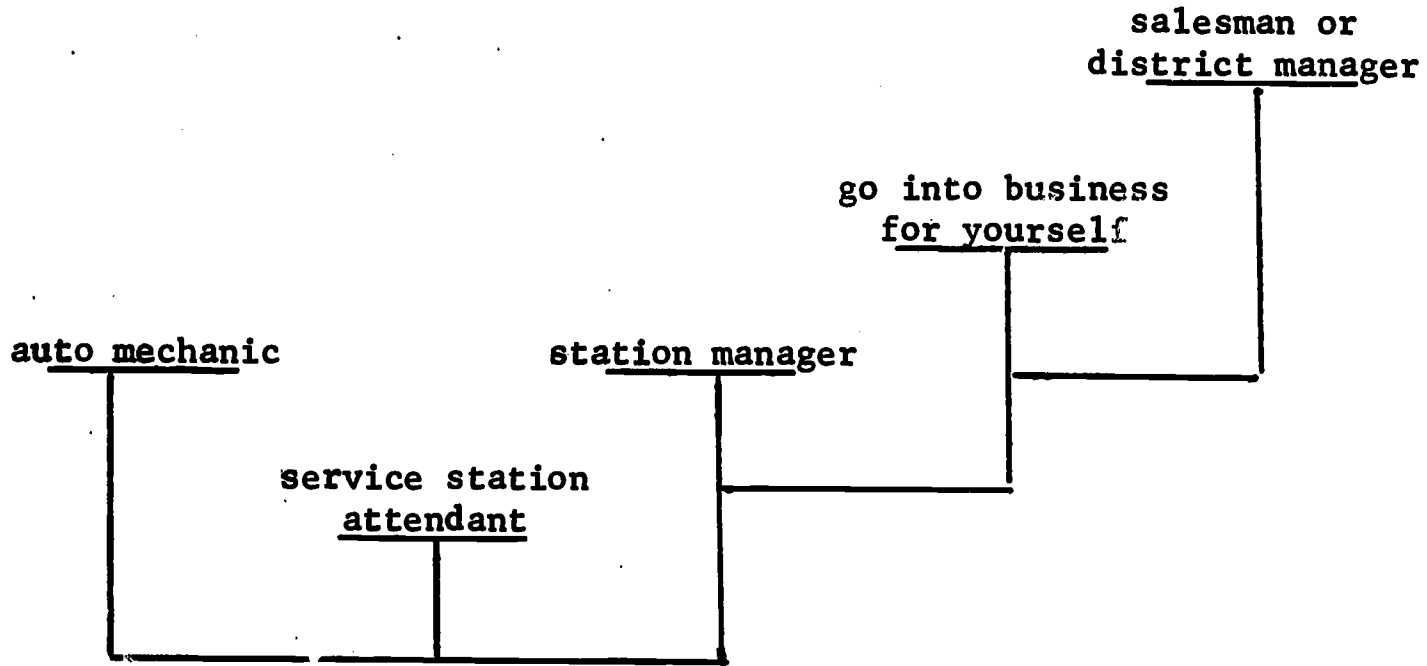
**Vocational Information For Education and Work**

Service Station Attendant - DOT Code 915.867  
(July 67)

IS THERE A NEED FOR SERVICE STATION ATTENDANTS?

- 1. In 1965 there were 3,796 service station attendants in Utah. It is predicted that by 1970 this number will increase to 4,633.
- 2. The need for service station attendants is increasing and will continue to rise because of increased car sales.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
 Utah State Board of Education  
 Utah State Department of Employment Security**



WHAT DO SEWING MACHINE OPERATORS DO?

THEY RUN HIGH SPEED ELECTRIC SEWING MACHINES THAT ARE USED TO MAKE VARIOUS TYPES OF CLOTHING

THEY:

1. Usually operate a machine with a single needle that makes a stitch similar to those made by home machines; they may operate a double needle machine to make a double seam.
2. Usually work on a small part or section of a piece of clothing.
3. They put the pieces of cloth together correctly and hold them so that the seam is straight and smooth.
4. Must be able to start and stop the machine smoothly.
5. May perform more difficult sewing operations such as setting collars and cuffs, or positioning pockets.
6. Spend much of their time correctly matching pieces of cloth before sewing them.
7. May be "floater" or "utility" operators who are able to work on any section of an article of clothing.
8. May be required to change to a new section of clothing as styles change.

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WHAT SHOULD SEWING MACHINE OPERATORS BE LIKE?

## THEY SHOULD BE:

1. Precise in their work
2. Neat
3. Fast
4. Dependable

## THEY SHOULD HAVE:

1. Good eyesight
2. Good finger coordination
3. Skillful hands
4. A concern for detail

## THEY SHOULD BE ABLE TO:

1. Work rapidly and accurately
2. Sit for long periods of time
3. Tolerate loud noises
4. Do monotonous work

(For a detailed description of your capabilities see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are home economics, sewing, and English.

## AFTER HIGH SCHOOL:

1. High school graduation is desirable.
2. Employers prefer to hire those with experience or training in sewing machine operation. This training can be received at Utah Technical College, Provo.
3. Some employers train sewing machine operators on the job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average salary for sewing machine operators was \$65 per week.
2. Their starting salary was \$50 per week.
3. Many employers pay according to the number of articles that the sewing machine operator completes.

WHAT ARE WORKING CONDITIONS LIKE?

1. Heating and ventilation is usually adequate.
2. There is continual noise from the operations of the sewing machines.
3. The operator is not required to do any lifting or carrying.
4. The work may become monotonous.
5. Handicapped persons who can use their hands may find employment in this occupation.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The majority of the sewing machine operators in Utah work in Salt Lake, Davis, Utah, Weber, and Box Elder counties. Opportunities are available in other areas of the state.

## TYPE OF INDUSTRY:

Clothing manufacturing companies employ the majority of sewing machine operators. There are approximately forty of these plants. Laundry and dry cleaning establishments employ a substantial number also.

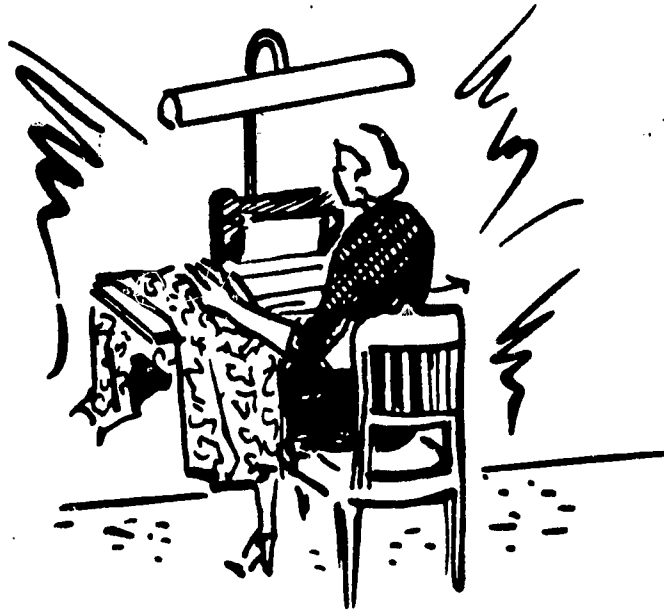
Vocational Information For Education and Work

Sewing Machine Operator - DOT Code 787.782  
(July 67)

IS THERE A NEED FOR SEWING MACHINE OPERATORS IN UTAH?

1. In 1965 there were 3,000 sewing machine operators in Utah. It is predicted that by 1970 this number will increase to 3,500.
2. This occupation is expanding rapidly and there is a high rate of turnover due to marriage and other factors. There is a constant demand for sewing machine operators.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



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**YOU ARE A SHEET METAL WORKER****WHAT DO SHEET METAL WORKERS DO?**

THEY PERFORM ALL OF THE OPERATIONS NECESSARY TO MAKE AND INSTALL ARTICLES OF LIGHT GAUGE SHEET METAL SUCH AS FURNACES, AIR DUCTS, BLOWERS FOR HEATING SYSTEMS, GUTTERS, ROOFING, SIDING AND WINDOWS.

**THEY:**

1. Determine how a job is to be done by using blueprints or drawings.
2. Make parts to be used by cutting sheet metal with hand or power shears, curving the metal or shaping it into tubes with forming machines, and bending it to specified angles by hand or machine.
3. Drill or punch holes in the metal.
4. Assemble parts, join seams, and attach hangers and brackets by welding, soldering, bolting, or riveting them together.
5. Smooth rough joints or surfaces with a file or grinding wheel.
6. Install the completed unit by welding, bolting, riveting or nailing it into place.
7. May specialize in a particular type of sheet metal work such as installing store fronts or making restaurant equipment.
8. May spend their time doing only shop work or may do only installation work.

WHAT SHOULD SHEET METAL WORKERS BE LIKE?**THEY SHOULD BE:**

1. Alert
2. Ambitious
3. Skillful in the use of their hands

**THEY SHOULD HAVE:**

1. Good size and distance judgment
2. Good eye-hand coordination
3. Average strength

THEY SHOULD BE ABLE TO:

1. Work in awkward positions
2. Learn new skills to accomplish difficult tasks
3. Work at heights
4. Do strenuous work.

(For detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?**IN HIGH SCHOOL:**

Subjects that will help you prepare for this job are shop courses, mechanical drawing, arithmetic, algebra, geometry and English.

**AFTER HIGH SCHOOL:**

1. A high school diploma is not required but is helpful in obtaining a position.
2. The best way to train for this job is as an apprentice. As an apprentice you will receive on-the-job training and related classroom instruction. After four years as an apprentice you may become a fully qualified worker called a journeyman.
3. Some workers have started as helpers. Opportunities for helpers are not nearly as good as for apprentices.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average wage for sheet metal workers in Utah was \$4.00 per hour.
2. Their starting wage for apprentices was \$2.00 per hour.
3. Some sheet metal workers earned as much as \$5.00 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Shops are noisy and often oily and greasy.
2. Most shops have adequate ventilation and heating.
3. Working conditions for installation men vary from awkward, confined areas to areas that have a lot of working space.
4. Injuries can result from the careless use of tools and machinery, from falls, from welding burns, and from contact with sharp metal edges.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Approximately two-thirds of the sheet metal workers in Utah work in the Salt Lake City-Ogden-Provo area.

## TYPE OF INDUSTRY:

Sheet metal manufacturing shops employ a large part of the sheet metal workers in Utah. Construction companies also employ a large number. Others work for small shops and contractors.

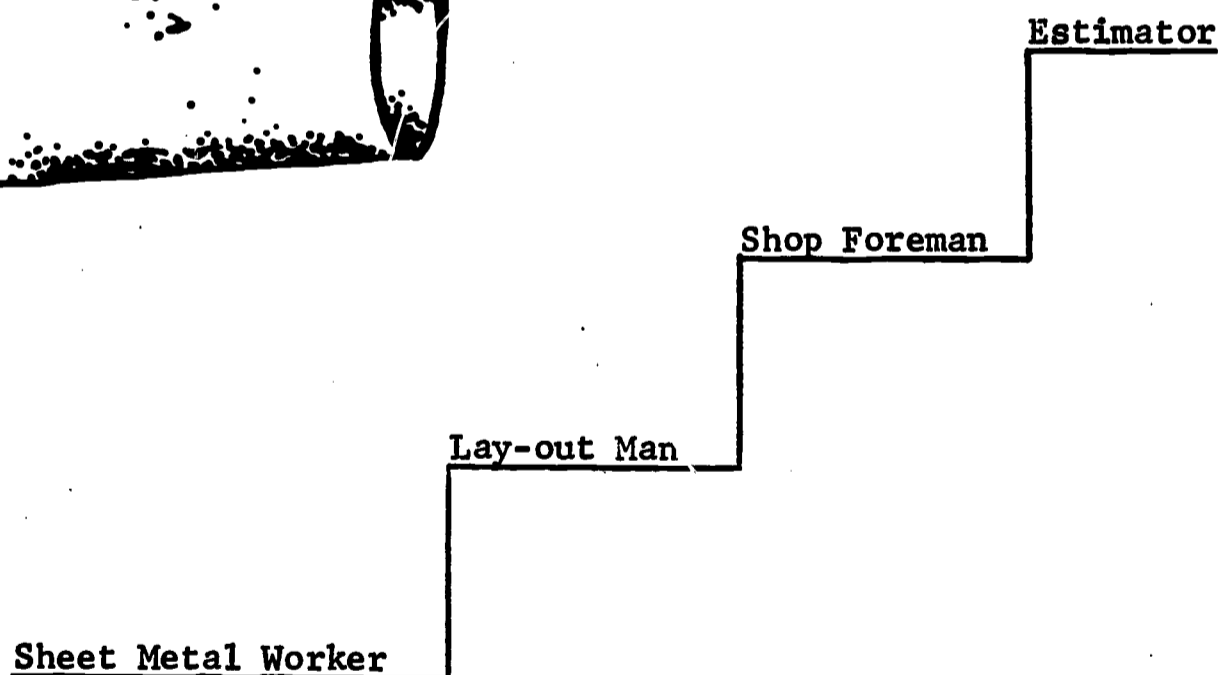
**Vocational Information For Education and Work**

Sheet Metal Worker - DOT Code 804.281  
(July 1967)

IS THERE A NEED FOR SHEET METAL WORKERS IN UTAH?

1. In 1965 there were 1250 sheet metal workers in Utah. It is predicted that by 1970 this number will increase to 1350.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



WHAT DO SHIPPING & RECEIVING CLERKS DO?

THEY KEEP TRACK OF MERCHANDISE TRANSFERRED FROM ONE PLACE TO ANOTHER.

THEY:

1. Make sure that merchandise is sent and received in good condition.
2. Keep records of all shipments sent and received.
3. Pack and unpack merchandise
4. Check the original order to see that the correct kind and quantity of merchandise is there
5. Figure out the freight and postage rates and address packages
6. Fill out shipping forms to send with merchandise and check these forms on shipments that arrive
7. Put cardboard containers together and order shipping boxes and other materials
8. Direct storing of the merchandise

THEY MAY ALSO:

1. Decide what kind of truck or train to use to ship merchandise
2. Operate forklifts, tow trucks, and loading conveyors.

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WHAT SHOULD SHIPPING & RECEIVING CLERKS BE LIKE?

## THEY SHOULD BE:

1. Dependable
2. Honest
3. Accurate
4. Healthy
5. Courteous

## THEY SHOULD HAVE:

1. Good eye-hand coordination
2. Full use of hands, arms, and legs
3. Average strength
4. Good judgment of size and distance
5. Legible handwriting

## THEY SHOULD BE ABLE TO:

1. Lift heavy, bulky objects
2. Use basic arithmetic
3. Work under pressure
4. Tolerate dirt, dust, heat, cold, and noise
5. Stand for long periods of time
6. Understand and follow written instructions

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are business arithmetic, typing, bookkeeping, and most other business subjects.

## AFTER HIGH SCHOOL:

Most employers require a high school diploma but no additional training. You will receive your training on the job.

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HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for shipping and receiving clerks in Utah was \$2.75 an hour.
2. Their starting pay was from \$1.40 - \$1.80 an hour.
3. Some earned as much as \$3.50 an hour depending upon their experience, and responsibilities.

WHAT ARE WORKING CONDITIONS LIKE?

1. Work is usually done indoors or in partially sheltered areas such as loading docks.
2. Your work area is likely to be large and drafty.
3. The work is sometimes strenuous, requiring lifting and moving heavy crates or boxes.
4. You may have to stand for long periods of time to check incoming and outgoing merchandise.
5. There is danger of falling crates or boxes, cuts from knives and other small injuries from handling large crates and boxes.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Shipping and receiving clerks work wherever there are large wholesale and retail establishments and manufacturers. Most of these establishments are located in the Ogden-Salt Lake-Provo area.

## TYPE OF INDUSTRY

Department stores, manufacturing companies, wholesale houses warehouses, and transportation companies employ the majority of shipping and receiving clerks.

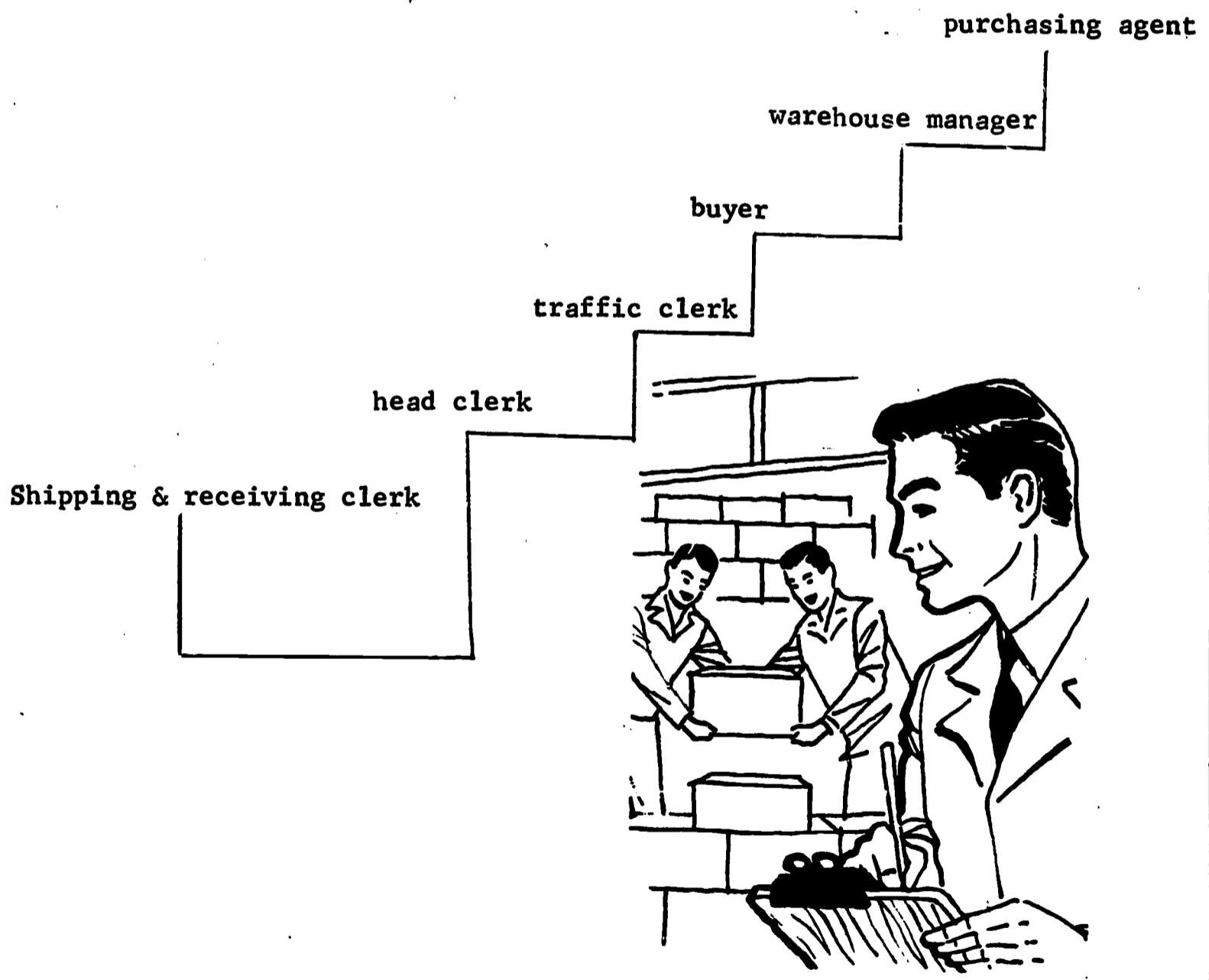
Vocational Information For Education and Work

Shipping & Receiving Clerk - DOT Code 222.587  
(July 67)

IS THERE A NEED FOR SHIPPING AND RECEIVING CLERKS IN UTAH?

- 1. In 1965, there were 1600 shipping and receiving clerks in Utah. It is predicted, that by 1970, this number will increase to 1834.
- 2. Men outnumber women in this field 9 to 1.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



**YOU ARE A STATIONARY FIREMAN****WHAT DO STATIONARY FIREMEN DO?**

**THEY OPERATE AND MAINTAIN STEAM BOILERS USED TO POWER INDUSTRIAL MACHINERY AND TO HEAT FACTORIES.**

**THEY:**

1. Operate mechanical devices that control the flow of air, gas, oil, or powdered coal into the firebox in order to keep proper steam pressures in the boilers
2. Read meters and other instruments to make sure that the boilers are operating correctly
3. Clean, oil, and grease the moving parts of the machinery
4. Check the machinery to make sure safety regulations are not being broken

**THEY MAY ALSO:**

1. Light the boilers and build up pressure
2. Make minor repairs on the machinery
3. Record information

WHAT SHOULD STATIONARY FIREMEN BE LIKE?

## THEY SHOULD BE:

1. In good health
2. Responsible
3. Dependable
4. Industrious

## THEY SHOULD HAVE:

1. Mechanical ability
2. Average strength
3. Initiative
4. Good judgment

## THEY SHOULD BE ABLE TO:

1. Tolerate dirt, heat, and noise
2. Work without close supervision
3. Use both hands normally

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are arithmetic, shop courses, chemistry, physics, and English.

## AFTER HIGH SCHOOL:

1. A high school degree is usually required.
2. Training is usually received on the job working as a helper.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 stationary firemen in Utah earned an average wage of \$2.40 per hour.
2. Their starting salary was \$1.80 per hour.
3. Some stationary firemen earned as much as \$2.75 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. There are usually machines in operation which cause constant noise.
2. The stationary fireman may work alone or be supervised by a stationary engineer.
3. Stationary firemen must often do greasy and grimy work.
4. Stationary firemen are subject to burns and falls if proper precautions are not taken.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most stationary firemen in Utah work in Salt Lake, Davis, Utah, Weber, and Box Elder Counties.

## TYPE OF INDUSTRY:

Stationary firemen are employed in factories, power plants, office and apartment buildings, hotels, hospitals, schools, and sewage and water treatment plants.

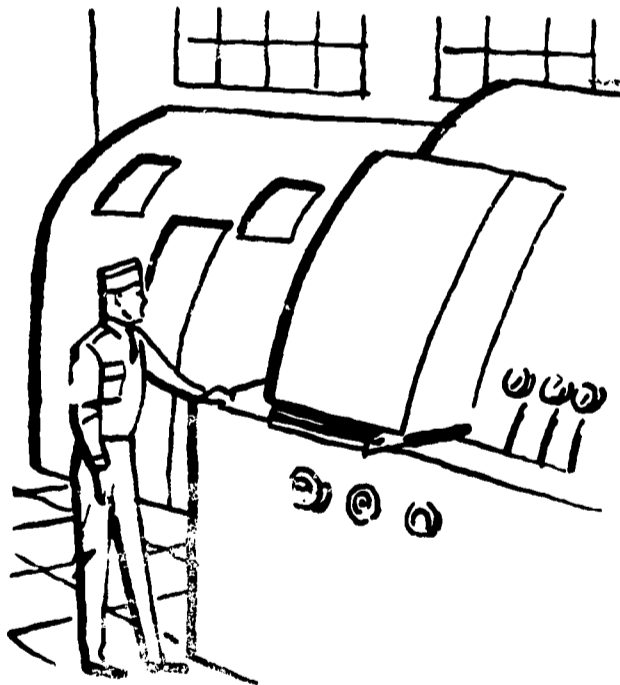
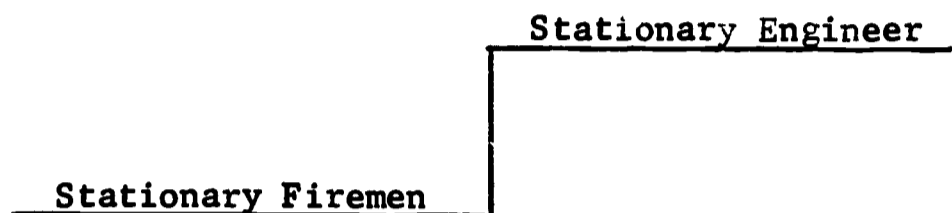
Vocational Information For Education and Work

Stationary Fireman - DOT Code 951.885  
(July 67)

IS THERE A NEED FOR STATIONARY FIREMEN IN UTAH?

1. In 1965 there were 350 stationary firemen in Utah. It is predicted that by 1970 this number will increase to 400.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



WHAT DO STATIONARY ENGINEERS DO?

THEY OPERATE AND MAINTAIN ALL THE DIFFERENT KINDS OF EQUIPMENT USED TO GENERATE POWER AND TO HEAT, VENTILATE, AND AIR CONDITION LARGE BUILDINGS AND OTHER STRUCTURES.

THEY:

1. Constantly observe meters, gages, and other instruments, to determine the operating condition of the equipment
2. Record information such as the amount of fuel used, temperature and pressure of boilers, number of pieces of equipment in use, hours of operation, and repairs made
3. Must detect and identify any trouble that develops by analyzing the various instrument readings and by watching and listening to the machinery
4. Operate levers, throttles, switches, valves, and other devices to regulate and control the machinery
5. Regularly inspect the equipment to make sure it is working properly

THEY MAY ALSO:

1. Repair the equipment they operate
2. Make mechanical changes so that the equipment will operate more efficiently
3. Perform various other duties depending on the size of the establishment in which they work



WHAT SHOULD STATIONARY ENGINEERS BE LIKE?

## THEY SHOULD BE:

1. In good health
2. Responsible
3. Dependable
4. Industrious

## THEY SHOULD HAVE:

1. Mechanical ability
2. Average strength
3. Initiative
4. Good judgment

## THEY SHOULD BE ABLE TO:

1. Work without close supervision
2. Take care of many details
3. Use both hands normally
4. Do some strenuous work

(For a detailed description of your capabilities see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are chemistry, physics, algebra, geometry, shop courses, and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is required.
2. The best way to prepare for this job is as an apprentice. As an apprentice you will receive on-the-job training and related classroom instruction. After four years as an apprentice you may become a fully qualified worker called a journeyman.
3. Military service, especially the navy, may provide opportunities to work around boilers and other types of steam equipment. This experience is very helpful in obtaining a position.
4. Some stationary engineers have gained experience by working as helpers.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1965 stationary engineers in Utah earned an average wage of \$3.00 per hour.
2. Their starting wage was \$2.25 per hour.
3. Some stationary engineers earned as much as \$4.00 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. There are usually motors in operation which cause constant noise.
2. The engineer may work in a separate, air conditioned control room.
3. Many stationary engineers work alone.
4. Working conditions vary greatly from plant to plant.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Most of the stationary engineers in Utah work in Salt Lake, Davis Utah, Weber, and Box Elder counties.

**TYPE OF INDUSTRY:**

Stationary engineers are employed in factories, power plants, office and apartment buildings, hotels, hospitals, schools, mines, and sewage and water treatment plants.

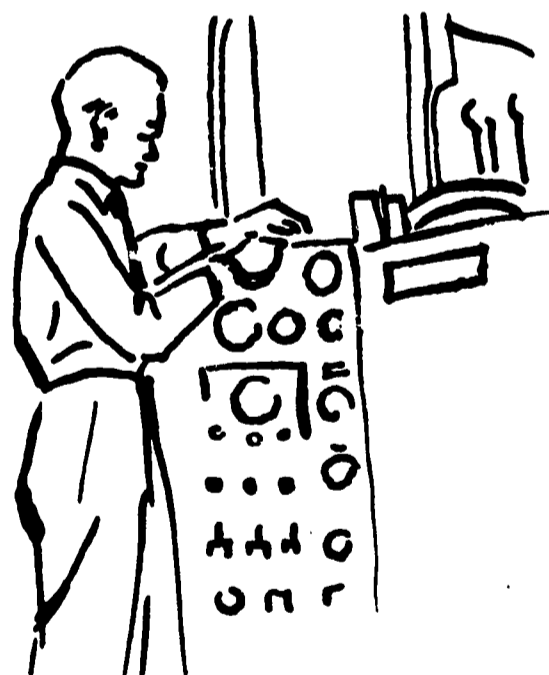
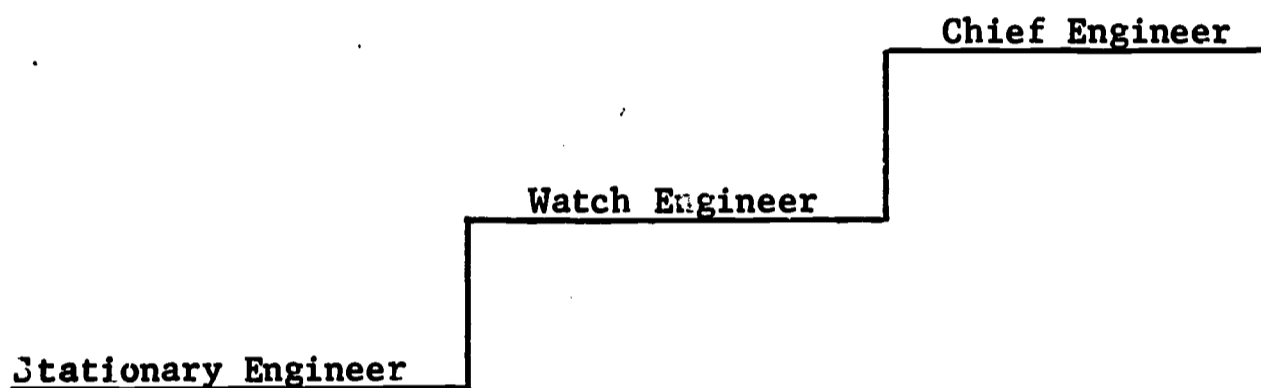
**Vocational Information For Education and Work**

Stationary Engineer - DOT Code 950.782  
(July 67)

IS THERE A NEED FOR STATIONARY ENGINEERS IN UTAH?

1. In 1965 there were 500 stationary engineers in Utah. It is predicted that by 1970 this number will increase to 575.
2. There is a need for stationary engineers at the present time. Future opportunities are especially good for air-conditioning specialists.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A STENOGRAPHER****WHAT DO STENOGRAPHERS DO?**

**THEY TAKE DICTATION IN SHORTHAND AND TRANSCRIBE THEIR NOTES ON A TYPEWRITER.**

**THEY:**

1. Take dictation from one or more persons, of letters, reports, and other matter, either in shorthand or on stenotype machine
2. Type up dictated material from their shorthand notes or from a tape recording machine into which the material has been dictated.

**THEY MAY ALSO:**

1. Do other typing
2. Answer the telephone, give information, and act as a receptionist
3. Operate various types of office machines such as duplicators and calculators
4. Prepare stencils and other material for duplicating
5. Do some filing

**TECHNICAL STENOGRAPHERS TAKE DICTATION IN MEDICAL, LEGAL, OR SCIENTIFIC TERMS OR IN A FOREIGN LANGUAGE.**

**COURT REPORTERS AND REPORTING STENOGRAPHERS RECORD, IN SHORTHAND, EVERY WORD THAT IS SAID IN COURT TRIALS, BUSINESS MEETINGS, CONVENTIONS, CONFERENCES, ETC., AND MUST BE VERY FAST AND ACCURATE.**

WHAT SHOULD STENOGRAPHERS BE LIKE?

## THEY SHOULD BE:

1. Dependable
2. Friendly
3. Tactful
4. Versatile
5. Even tempered
6. Alert

## THEY SHOULD HAVE:

1. Good finger coordination
2. Good vision and hearing
3. Good judgment
4. A neat appearance
5. A pleasant personality
6. A good vocabulary

## THEY SHOULD BE ABLE TO:

1. Pay attention to detail
2. Get along well with others
3. Spell and punctuate correctly and use good grammar
4. Type at least 40 words a minute
5. Take dictation at a rate of at least 80 words a minute
6. Work fast and accurately

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are typing, shorthand, English, office practice, bookkeeping, and other business related courses.

## AFTER HIGH SCHOOL:

1. Graduation from high school is essential. Some employers will hire high school graduates who have completed typing and shorthand courses in high school.
2. Most employers prefer to hire stenographers who have received additional training. All colleges, junior colleges, business schools and trade schools, in Utah, offer programs for the stenographer.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, stenographers in Utah earned from \$2.00 - \$2.25 an hour.
2. Their starting pay was from \$1.50 - \$2.00 an hour.
3. Some stenographers earned as much as \$2.75 an hour depending upon their experience and skill.
4. Legal and technical stenographers earned as much as \$3.00 and more an hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Most offices are pleasant, well-lighted, and air conditioned. They will vary from small to spacious and from plain to luxurious depending upon where you work.
2. You may work in a one or two girl office or be part of a large stenographic pool of girls.
3. You may take dictation from one person only or from several persons.
4. You will spend most of your day sitting.
5. At times, there will be pressure to work fast.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Stenographers are employed by public and private agencies of practically every size and type. Most of these are located in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake and Utah counties.

## TYPE OF INDUSTRY:

Manufacturing firms, government agencies, insurance companies, banks, business offices, department stores, colleges, hospitals, lawyers, and doctors' offices employ the majority of stenographers.

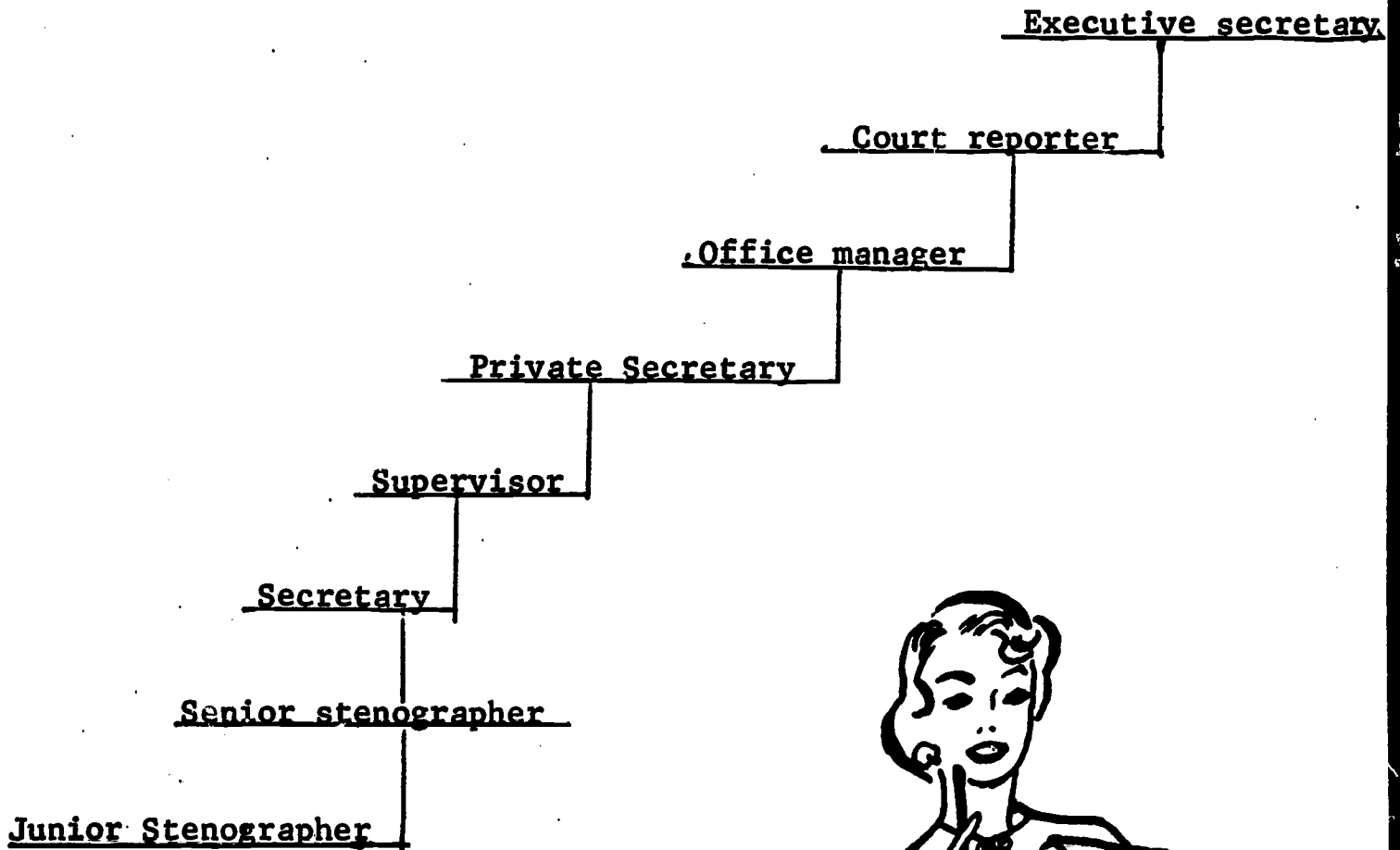
Vocational Information For Education and Work

Stenographer - DOT Code 202.388  
(July 67)

IS THERE A NEED FOR STENOGRAPHERS IN UTAH?

1. In 1965, there were 3,646 stenographers in Utah. It is predicted that by 1970 this number will increase to 4,224.
2. The need for stenographers will continue to be high as business activity grows and because many stenographers leave to marry or raise families.
3. There are few men in this field. Most male stenographers are court reporters or reporting stenographers.

CAN YOU ADVANCE?




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**YOU ARE A STOCK CLERK****WHAT DO STOCK CLERKS DO?****THEY:**

1. Receive, unpack, and store merchandise, equipment, tools and supplies in stockrooms
2. Count the incoming goods to make sure the correct amount was shipped, and check for any damage
3. Arrange the merchandise on shelves, on platforms, or in bins according to some system that makes it easy to find
4. Fill orders and often deliver the merchandise or supplies requested
5. Keep records of all items they receive and send out
6. Order replacements of basic supplies

**THEY MAY ALSO:**

1. Take inventory by counting all items in the storeroom
  2. Make minor repairs of damaged merchandise in stock
  3. Be required to keep the stockroom neat and clean
- 



WHAT SHOULD STOCK CLERKS BE LIKE?

**THEY SHOULD BE:**

1. Honest
2. Dependable
3. Neat

**THEY SHOULD HAVE:**

1. Full use of arms, legs and back
2. An interest in routine work
3. Legible handwriting

**THEY SHOULD BE ABLE TO:**

1. Do heavy lifting
2. Climb ladders
3. Follow instructions
4. Stand for long periods of time

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are English, business arithmetic, and typing.

**AFTER HIGH SCHOOL:**

1. Many employers require a high school diploma but no additional training. You will receive your training on-the-job.
2. Business classes in high school and business training from business schools, vocational schools or junior colleges will help you gain promotions.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, stock clerks in Utah made from \$1.75-\$2.50 an hour depending upon their experience and where they worked.
2. Stockroom helpers made from \$1.25-\$1.50 an hour. Many clerks begin as helpers.

WHAT ARE WORKING CONDITIONS LIKE?

1. Some stockrooms are drafty, damp, and dusty, and others are clean, well-ventilated and comfortable.
2. There is danger of strain from heavy lifting. There is also a possibility of injuries from falling boxes and crates.
3. You will be on your feet most of the day. The amount of heavy physical work you will have to do depends on the type of material in your stockroom.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Over 80% of Utah's stock clerks are employed in the Ogden-Salt Lake-Provo area.

## TYPE OF INDUSTRY:

Stock clerks are found wherever there is an establishment that keeps merchandise or supplies in large quantities. This includes retail stores, wholesale houses, manufacturing industries, warehouse companies and government storehouses.

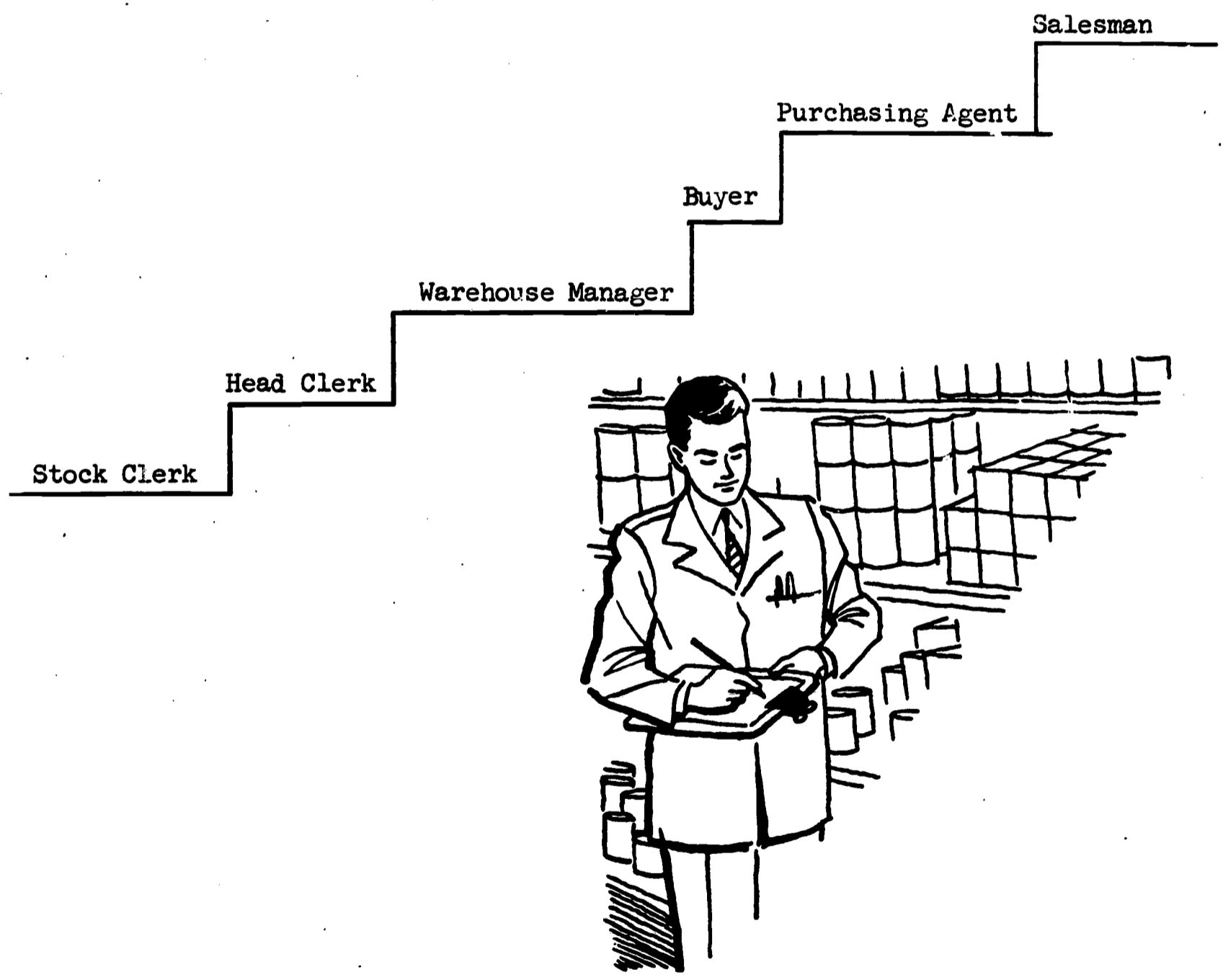
**Vocational Information For Education and Work**

Stock Clerk - DOT Code 223.387  
(July 67)

IS THERE A NEED FOR STOCK CLERKS IN UTAH?

- 1. In 1965, there were 1,680 stock clerks in Utah. It is predicted that by 1970 this number will increase to 1,894.
- 2. 75% of all stock clerks are men because of the heavy lifting they must do. Women are employed as stock clerks when the items involved are small and light.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



YOU ARE A STRUCTURAL STEEL WORKER,  
ORNAMENTAL IRON WORKER,  
REINFORCING IRON WORKER

WHAT DO STRUCTURAL STEEL WORKERS DO?

THEY PUT UP THE STEEL FRAMEWORK OF BRIDGES, BUILDINGS, AND OTHER STRUCTURES.

THEY:

1. Set up rigging and hoisting equipment for lifting steel beams and other parts into place
2. Attach cables to the material to be lifted and direct it into place by giving hand signals to the hoisting machine operator
3. Work steel beams, girders, plate, and other material into proper position while being held by the hoisting equipment
4. Temporarily bolt the parts together by putting a steel pin through prepunched holes
5. Pull and twist the beams and girders, using crowbars and wedges, until they are exactly where they belong
6. Weld and rivet the steel pieces together permanently

THEY MAY ALSO:

1. Specialize in one particular activity such as rigging and hoisting, welding and riveting, etc.
2. Work in a shop as Shop Iron Workers, bending, shaping, and drilling holes in steel products.

REINFORCING IRON WORKERS SET STEEL BARS IN CONCRETE FORMS TO REINFORCE CONCRETE STRUCTURES.

ORNAMENTAL IRON WORKERS INSTALL METAL STAIRWAYS, FLOOR GRATINGS, METAL WINDOWS AND DOORS, METAL CABINETS, DECORATIVE BALCONY IRONWORK, AND OTHER ORNAMENTAL IRON WORK.

WHAT SHOULD STRUCTURAL STEEL WORKERS BE LIKE?

**THEY SHOULD BE:**

1. Agile
2. In good physical condition
3. Coordinated
4. Safety minded
5. Mechanically inclined

**THEY SHOULD HAVE:**

1. A good sense of balance
2. Above average strength
3. No fear of heights
4. Good eyesight
5. Good judgment of form

**THEY SHOULD BE ABLE TO:**

1. Work in high places
2. Climb, balance, stoop, and kneel
3. Lift heavy objects
4. Use basic arithmetic

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are drafting, mathematics, mechanical drawing, and shop.

**AFTER HIGH SCHOOL:**

The best way to become a fully qualified structural steel worker is to train for three years as an apprentice. During this time you will receive supervised on-the-job training and related classroom instruction.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the union wage for structural steel workers in Utah was \$4.85 an hour.
2. The beginning wage for apprentices was approximately \$3.15 an hour.
3. Structural steel workers may be laid off during bad weather and winter months.

WHAT ARE WORKING CONDITIONS LIKE?

1. At times, you will work at great heights, on narrow footing.
2. There is danger of falling while working high up. However, safety nets, belts, and scaffolding eliminate most of this danger.
3. There is danger of being hit by falling objects. Safety helmets and gloves eliminate most of this danger.
4. You will probably spend some of your time traveling to different construction sites throughout the state.
5. You will work outdoors in all kinds of weather.
6. Your work is often very strenuous.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

80% of Utah's structural steel workers live in the Wasatch Front area of Weber, Davis, Salt Lake, and Utah counties.

## TYPE OF INDUSTRY:

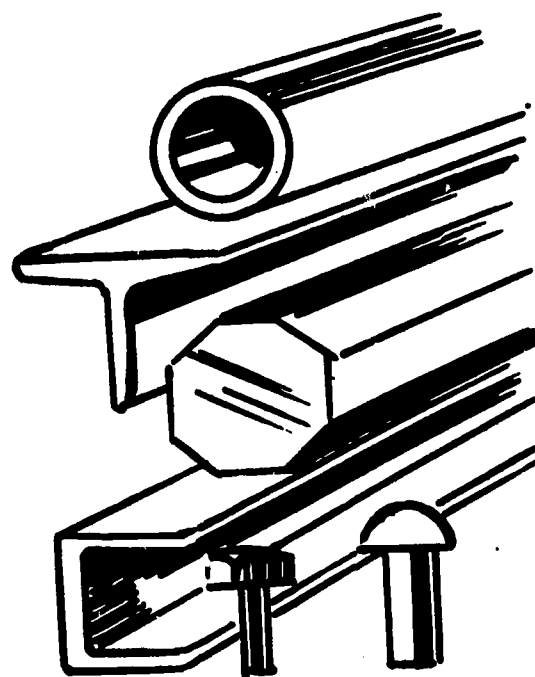
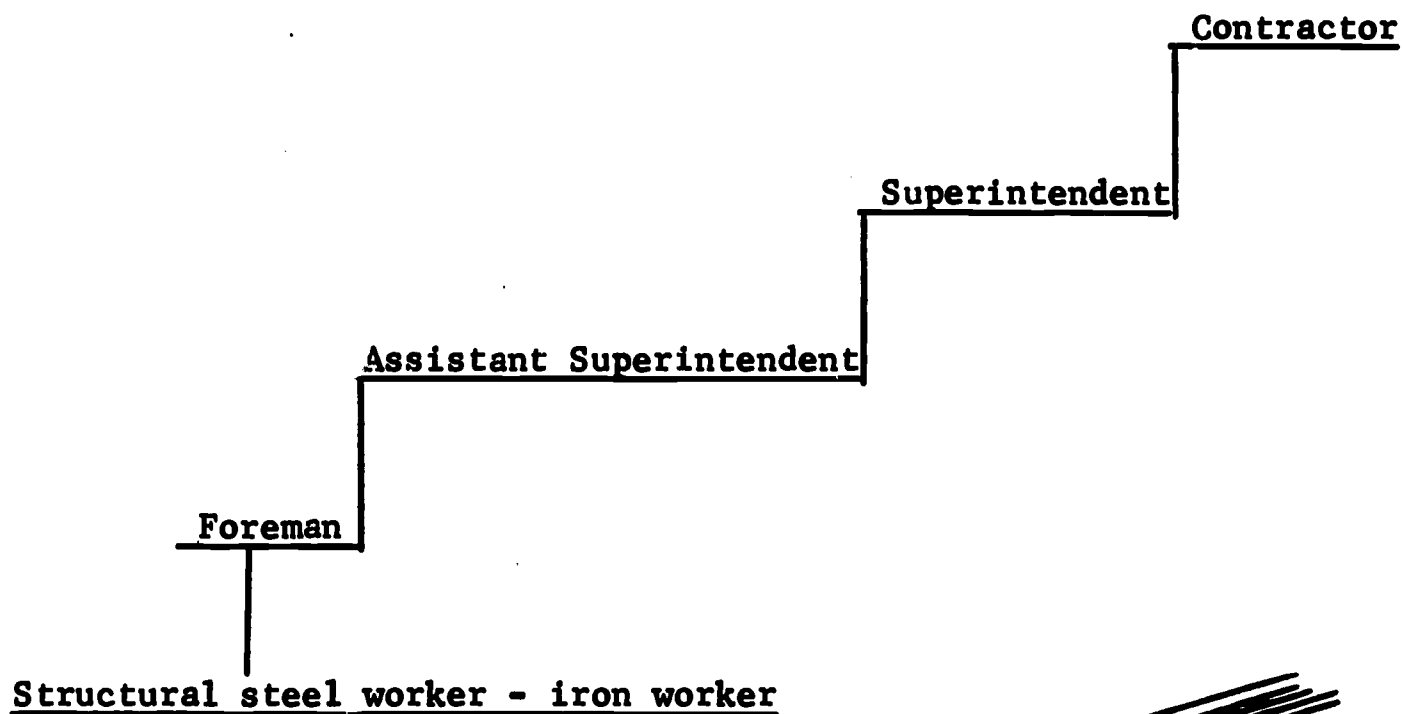
Steel and iron contractors and general contractors in the construction industry employ the majority of structural steel workers. Large industrial establishments and steel fabricating companies also employ some structural steel workers.

**Vocational Information For Education and Work**  
 Ornamental-Reinforcing Iron Worker - DOT Code 619.380 801.781  
 (July 67)

IS THERE A NEED FOR STRUCTURAL STEEL WORKERS IN UTAH?

1. In 1965, there were 511 structural steel and iron workers in Utah. It is predicted that by 1970 this number will increase to 674.
2. The need for structural steel workers will continue to rise as steel becomes more popular in construction activity grows.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



**YOU ARE A SURVEYOR'S ASSISTANT****WHAT DO SURVEYOR'S ASSISTANTS DO?****THEY WORK AS MEMBERS OF A SURVEYING TEAM BY:**

1. Helping to measure boundary lines, determining where freeways are to go, and locating the places that other projects are to go
2. Measuring distances by using a surveyor's chain or tape measure
3. Using a vertical rod, like a yardstick, to help measure elevations, distances, and directions between selected points
4. Moving a disc up or down a rod to match the elevation of one point with another
5. Driving marker stakes into the ground and clearing brush from survey lines

**THEY MAY ALSO:**

1. Do simple drafting, trace details of blueprints, and make mathematical calculations
2. Set up surveying instruments such as a theodolite, transit, level, altimeter, and other instruments.
3. Call out instrument readings to the surveyor
4. Take field notes and record the instrument readings

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WHAT SHOULD SURVEYOR'S ASSISTANTS BE LIKE?

**THEY SHOULD BE:**

1. In good physical shape
2. Alert
3. Patient and persistent
4. Dependable

**THEY SHOULD HAVE:**

1. A concern for detail
2. Good size and distance judgment
3. Good eye-hand coordination
4. A liking for the outdoors

**THEY SHOULD BE ABLE TO:**

1. Work rapidly and accurately
2. Stand for long periods
3. Do strenuous work
4. Work well with others

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are algebra, geometry, trigonometry, drafting, and mechanical drawing.

**AFTER HIGH SCHOOL:**

Most employers require a high school diploma, but training is obtained on the job. To advance to a higher level job, additional training in college or trade school is almost essential. Surveying and engineering courses are offered at the Utah Technical Colleges in Salt Lake and Provo, and at nearly all of the various colleges and junior colleges in Utah.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the union wage for surveyor's assistants in Utah was \$3.80 per hour.
2. Their starting wage was from \$1.50 to \$2.50 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Nearly all of the surveyor's assistant's work is done out of doors.
2. Bad weather may cause periods of unemployment.
3. During the winter months surveyor's assistants are frequently out of work.
4. One job may not last very long, and periods of unemployment are common.
5. The work may be tiring.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most surveyor's assistants work along the Wasatch Front areas, but there are employment opportunities throughout the state.

## TYPE OF INDUSTRY:

About half of Utah's surveyor's assistants work for federal, state, and local government agencies. A large number work for construction companies, engineering firms, or architectural firms. Many work for surveying teams. Others work for the petroleum and gas industries.

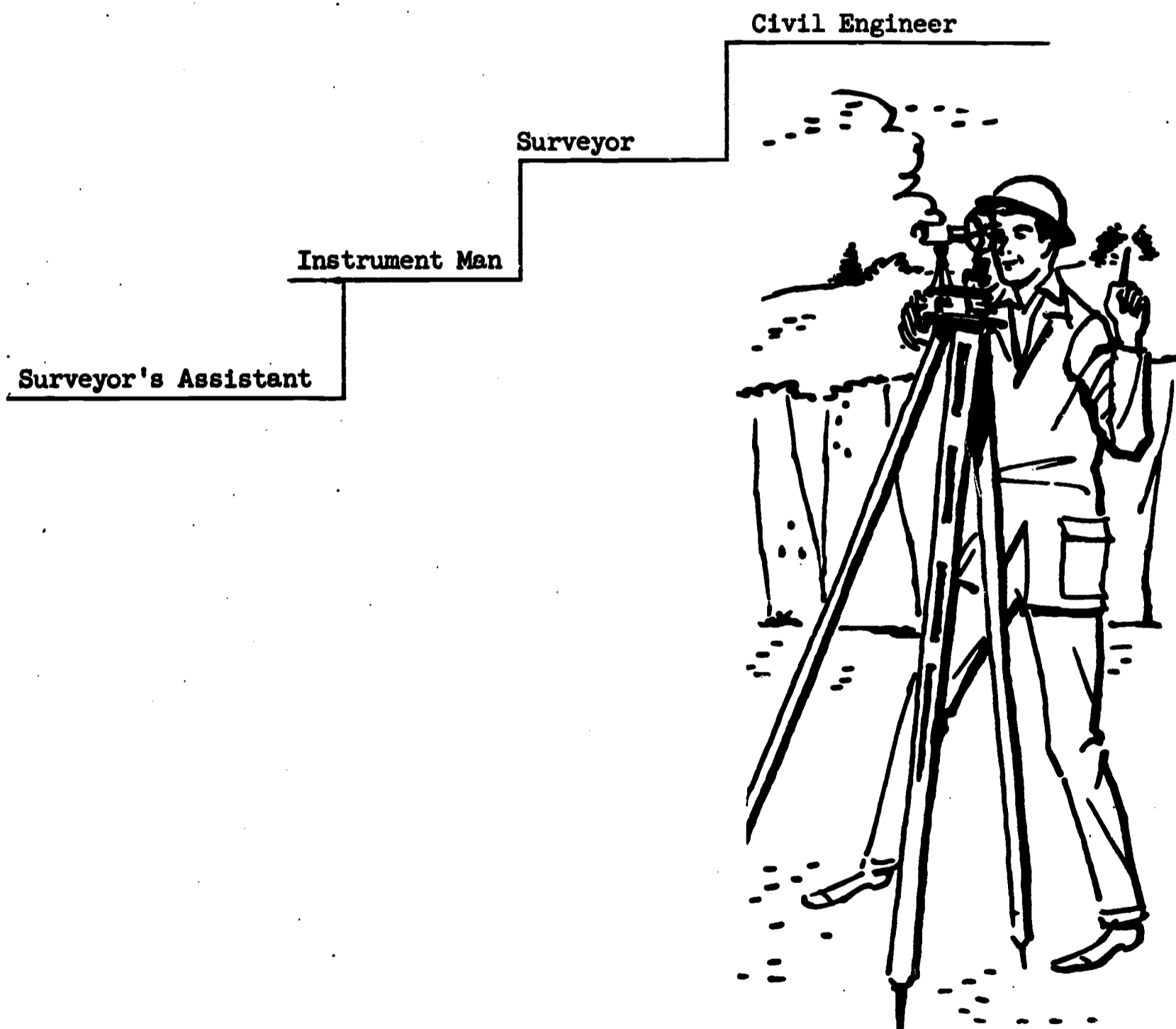
Vocational Information For Education and Work

Surveyor's Assistant - DOT Code 018.587  
(July 67)

IS THERE A NEED FOR SURVEYOR'S ASSISTANTS?

1. In 1965 there were 430 surveyor's assistants in Utah. It is predicted that by 1970 this number will increase to 480.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## Y O U A R E A T A I L O R

WHAT DO TAILORS DO?

THEY MAKE MENS CLOTHES FROM START TO FINISH BY HAND OR MACHINE.

## THEY:

1. Take the customer's measurements
2. Help him select the style and fabric he wants
3. Make a pattern from the customer's measurements
4. Cut the cloth following the pattern
5. Sew the pieces of cloth together
6. Give the customer two or three fittings before the garment is finished.

## THEY MAY ALSO:

1. If they work in a large factory, specialize in either pattern-making, cutting, or sewing
2. Work in a shop as fitters or alteration tailors who take the customer's measurements, help him select the material and style, then send the material and measurements to a small factory that specializes in tailoring
3. Repair rejected garments in a factory

ALTERATION TAILORS (also called Bushelmen) WORK IN RETAIL STORES WHERE THEY FIT READY MADE GARMENTS TO THE CUSTOMER AND MAKE NEEDED ALTERATIONS.

## THEY:

1. Put cuffs on men's trousers and take in or let out the waist
2. Adjust the sleeve length, collar and sides on coats
3. Narrow lapels and pant legs and make any other adjustments desired.

WHAT SHOULD TAILORS BE LIKE?

## THEY SHOULD BE:

1. Patient
2. Precise
3. Neat
4. Can be handicapped

## THEY SHOULD HAVE:

1. Good eyesight
2. Good color vision
3. Good finger coordination
4. Artistic ability

## THEY SHOULD BE ABLE TO:

1. Work fast and accurately for long periods of time
2. Do routine work that may become boring
3. Sit for long periods of time

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are sewing, design, mathematics, business, and English.

## AFTER HIGH SCHOOL:

1. Although high school graduation is not necessary, your chances of finding a job are much better if you are a graduate.
2. You will receive on-the-job training.
3. Utah Technical College, Provo, offers a course in power sewing that would be valuable training in helping you find a job.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for tailors working in garment making factories was from \$2.00 - \$3.00 an hour. Some doing highly specialized work made more than \$3.00 an hour.
2. Workers doing routine work in an alteration shop earned from \$1.50 - \$2.00 an hour. Those doing more advanced alteration work earned from \$2.75 - \$3.25 an hour.
3. Some factory workers are paid according to the number of pieces they do a day. Thus the faster you are the more you will earn. Custom tailors who have their own shops and can attract many well to do customers may earn as much as \$12,000 a year.

WHAT ARE WORKING CONDITIONS LIKE?

1. Many clothing factories and alteration shops are located in old buildings. However, like the new shops, they are generally well-lighted and well-ventilated.
2. There are no real dangers associated with this job except for an occasional prick of the finger.
3. At times, this work may become slightly monotonous.
4. You will spend much of your time sitting at a bench.
5. This type of work is just sew sew, and may be needling at times!

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most of Utah's tailors work in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake, and Utah counties. Tailors in smaller cities may also act as clothing salesmen.

## TYPE OF INDUSTRY:

Garment manufacturing companies, custom tailor shops, and retail alteration shops employ the majority of tailors.

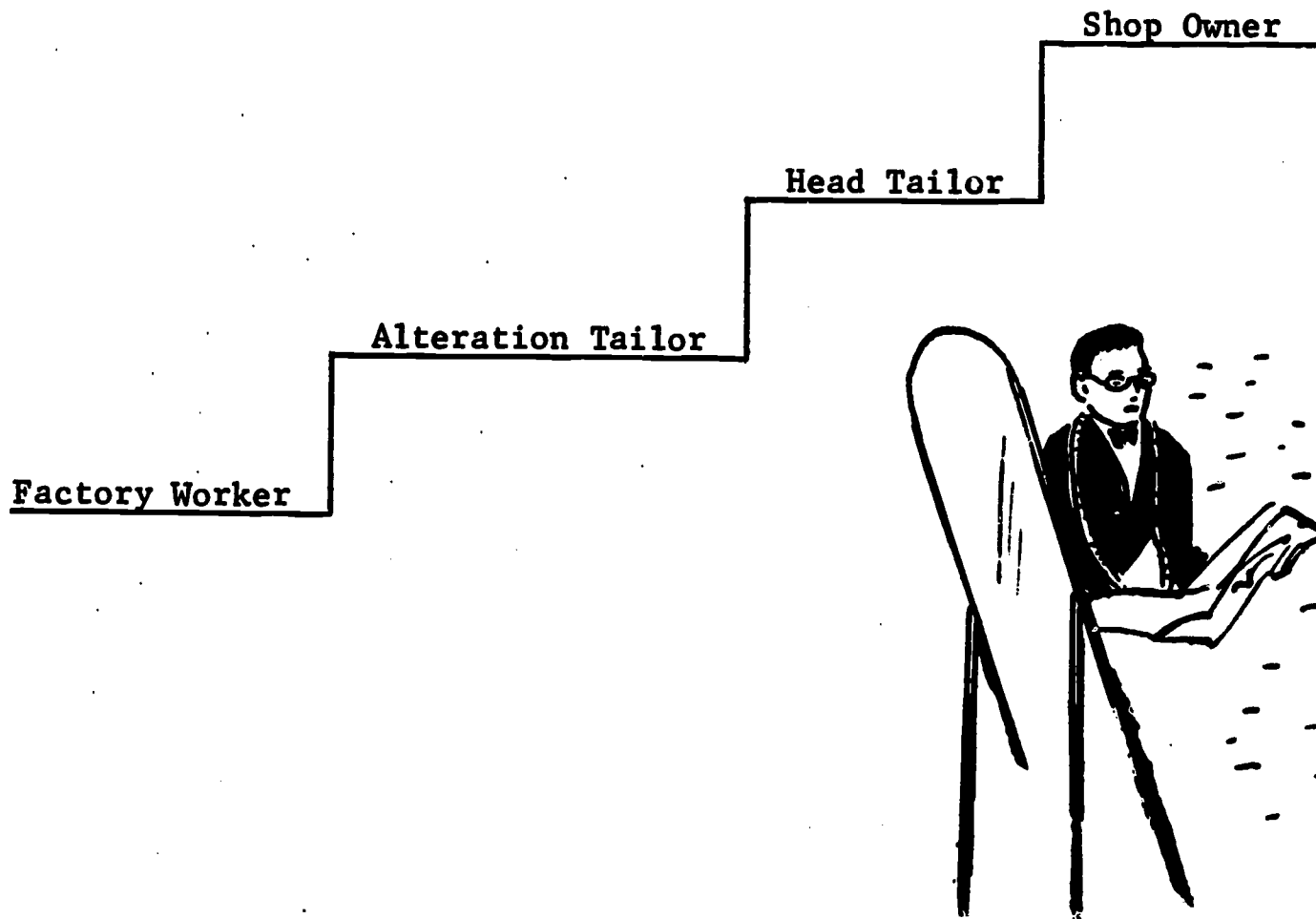
Vocational Information For Education and Work

Tailor - DOT Code 785.261  
(July 67)

IS THERE A NEED FOR TAILORS IN UTAH?

1. In 1965, there were 301 tailors in Utah. It is predicted that by 1970 this number will increase to 337.
2. The greatest demand for tailors will be in the factories as power sewers, cutters, and patternmakers.
3. Women workers (tailoresses) are taking over many of the more common, routine tasks in alteration shops.
4. There will be a steady need for custom tailors as not many people enter this field. Those with talent and ability may do very well.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



## YOU ARE A TAXI DRIVER

### WHAT DO TAXI DRIVERS DO?

THEY DRIVE TAXICABS TO TRANSPORT PASSENGERS FROM ONE PLACE TO ANOTHER

THEY:

1. Answer requests received on a two-way radio system in their car, or on a phone at a cab stand, to pick up passengers at a certain location
2. Wait in front of hotels, bus and railroad stations, airports, theaters, sports arenas, and other places where there might be a lot of potential passengers
3. Help passengers in and out of the cab and take care of their baggage if they have any
4. Record the date, time, and place passengers were picked up, their destination, time of arrival, and the fare
5. Collect the fare, based on mileage or time, as it is recorded on a taximeter, and make change if necessary
6. Must know all traffic laws and regulation, have a good driving record, and no criminal record.

THEY MAY ALSO:

1. Pick up passengers who "flag" them for a ride as they are returning to their post
2. Give information to passengers about scenic attractions, recreational areas, lodging and eating places and may take out of town visitors on sight-seeing tours
3. Keep their cabs washed, cleaned, and lubricated.



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WHAT SHOULD TAXI DRIVERS BE LIKE?

## THEY SHOULD BE:

1. Cautious
2. Courteous
3. Tactful
4. Even tempered
5. Calm
6. In good health

## THEY SHOULD HAVE:

1. A neat appearance
2. A pleasant personality
3. Stable emotions
4. Good eye-hand-foot coordination
5. Good eyesight and color vision
6. Quick reflexes

## THEY SHOULD BE ABLE TO:

1. Keep calm under pressure
2. Get along well with people
3. Judge distances accurately
4. Drive skillfully
5. Give accurate information as to the location of different places in their city.

( For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are driver training, arithmetic, and English.

## AFTER HIGH SCHOOL:

1. You will receive your training on the job.
2. You must have a regular driver's license as well as a chauffeur's license. To obtain a chauffeur's license, you must be 21 years old.

HOW MUCH MONEY WILL YOU MAKE?

1. Earnings for taxi drivers vary greatly. Many taxi drivers are only part-time workers, while others work long hours, six days a week.
2. Your earnings will depend upon the number of hours you work, The number of passengers you transport a day, the tips you receive and the type of salary you are paid.
3. The average earnings for full-time taxi drivers is from \$100 to \$150 a week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Taxi drivers generally have to work irregular hours, including some evenings, nights, weekends, and holidays.
2. Although driving a taxi is not hard physically, it can be very tiring and nerve wracking.
3. Many taxi drivers enjoy the freedom they have from supervision.
4. At times, you will have to deal with rude customers, but must remember to be polite at all times.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

90% of Utah's cab drivers work in the Wasatch Front area of Box Elder, Davis, Weber, Salt Lake, and Utah counties.

## TYPE OF INDUSTRY:

Some taxi drivers own their own cabs, others rent theirs, and still others work for a cab company that owns many cabs.

Vocational Information For Education and Work

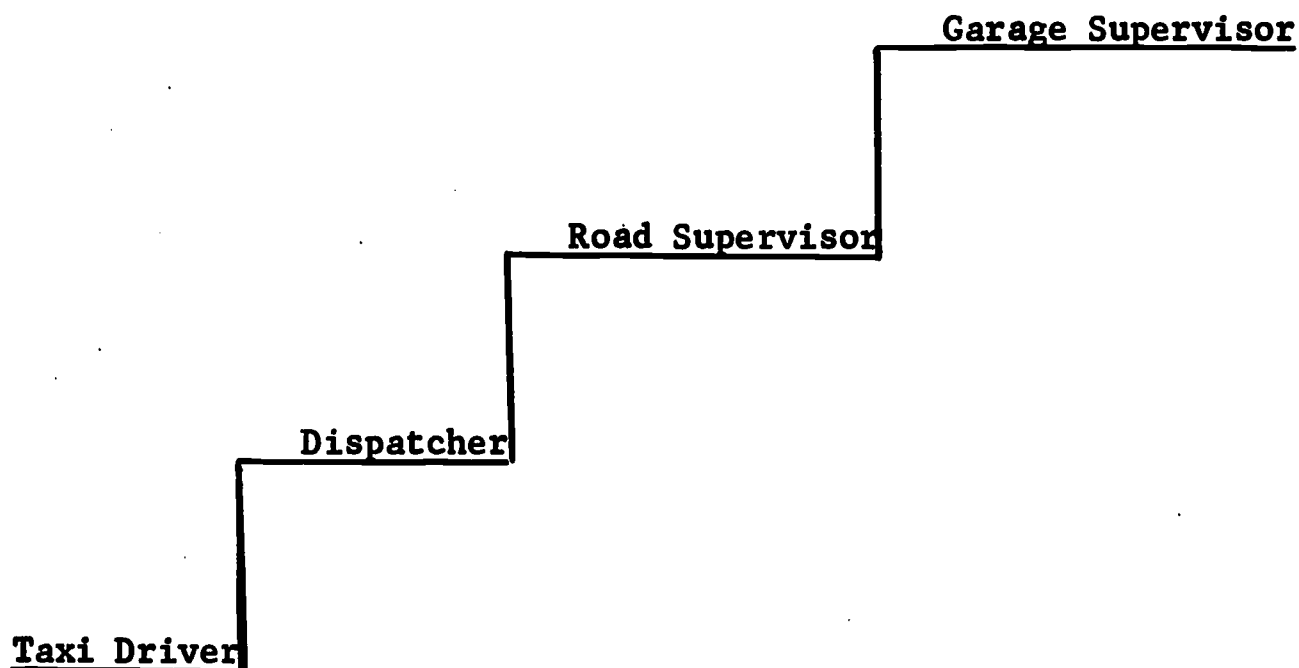
Taxi Driver -- DOT Code 913.463 (July 1967)

IS THERE A NEED FOR TAXI DRIVERS IN UTAH?

1. In 1965, there were 222 taxi drivers in Utah. It is predicted that by 1970 this number will decrease to 140.
2. The increase in the number of people who own cars will result in a decrease in the need for taxi service.
3. There will always be a demand for taxi drivers, however, because of a high turnover among drivers. Many part-time drivers leave for full time jobs and other drivers often find different jobs.

CAN YOU ADVANCE?

There are few opportunities for advancement in this field.



Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security



**YOU ARE A TECHNICAL ILLUSTRATOR****WHAT DO TECHNICAL ILLUSTRATORS DO?**

**THEY DRAW THREE DIMENSIONAL PICTURES OF MACHINE AND EQUIPMENT PARTS FOR:**

1. Sales catalogs
2. Work guides and part lists where all parts available to a worker are drawn and named so that the worker can easily identify the part he needs.

**THEY DRAW ILLUSTRATIONS FOR HANDBOOKS AND MANUALS TO SHOW HOW:**

1. Different parts should be put together to form a piece of machinery or equipment
2. One part fits into a machine
3. An entire machine operates

**THEY MAKE CHARTS, DIAGRAMS, ENLARGED DRAWINGS AND DRAWINGS SHOWING DETAIL OF PARTS AND THE WAY THEY ARE PUT TOGETHER.**

**THEY COLOR AND SHADE PARTS OF A DRAWING TO CALL ATTENTION TO CERTAIN AREAS.**

**THEY MAY ALSO:**

1. Construct models of a machine part out of heavy paper.
2. Draw cartoons to illustrate human motion and machine movement
3. Do the lettering of titles and descriptions that go along with the drawings.

**EQUIPMENT THEY USE INCLUDES:**

T-squares, triangles, protractors, curves, pencils, ink, oils, water colors, brushes.

WHAT SHOULD TECHNICAL ILLUSTRATORS BE LIKE?

## THEY SHOULD BE

1. Artistic
2. Creative
3. Mechanically inclined
4. Fast and accurate

## THEY SHOULD HAVE:

1. Good judgment concerning size and distance
2. Excellent eyesight
3. Good color discrimination
4. Eye-hand coordination

## THEY SHOULD BE ABLE TO:

1. Visualize an object in three dimensions from just a description or a photograph
2. Draw an object from blueprints, verbal instructions and someone else's idea
3. Sit and concentrate on details for long periods of time

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

1. Subjects that will help prepare you for this job are mechanical drawing, photography, printing, drawing, commercial art, lettering, and design.
2. You should also take courses in science, mathematics, industrial arts and shop.

## AFTER HIGH SCHOOL:

1. Artistic ability is probably the most important requirement for this job. Some employers will hire a high school graduate who has had no additional training, after seeing a sample of his work, and then train him on the job.
2. Most employers want someone with from two to three years of extra schooling at a commercial or vocational art school or from a college art department. Utah's colleges and universities have art departments that will give you the necessary training. In addition, Salt Lake Trade Tech. and Utah Trade Tech. offer some classes in this field.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 technical illustrators in Utah made from \$450-\$600 a month, depending upon their training, experience, and length of time employed. Some technical illustrators eventually make \$800 a month.
2. Their starting salary was from \$250-\$450 a month, depending upon how much additional training they had.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Practically all technical illustrators are located in Utah's major counties where the large industries are. These would be Salt Lake, Davis, Box Elder, Weber and Utah counties.

**TYPE OF INDUSTRY:**

1. Technical illustrators generally work for the government or for companies with government contracts in missiles, aircraft and spacecraft. There are also firms specializing in technical illustrations who do work for anyone needing it.
2. **THE FREE-LANCE ILLUSTRATOR.** Some technical illustrators work for themselves, finding work with different companies needing their services only temporarily. They must be able to sell their own work and often hunt it up on their own. A real good and ambitious free-lance artist may make more money than a regularly employed illustrator.

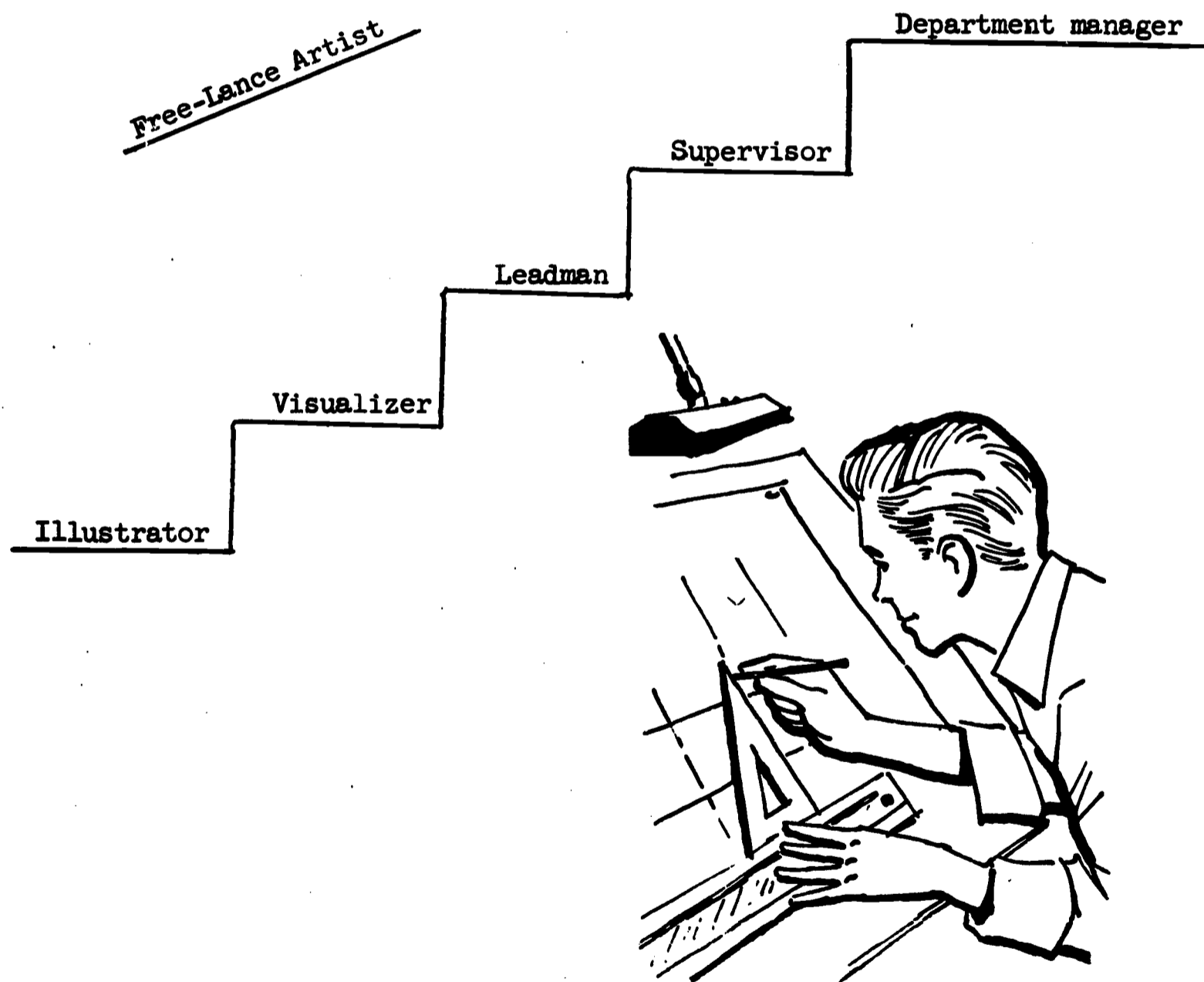
**Vocational Information For Education and Work**

Technical Illustrator - DOT CODE 017.281  
(July 67)

IS THERE A NEED FOR TECHNICAL ILLUSTRATORS?

1. In 1965 there were 190 technical illustrators and commercial artists in Utah. It is predicted that by 1970 this number will increase to 226.
2. The need for technical illustrators depends largely upon government contracts in the missile and aircraft industries. If, in the future, Utah's industries should receive additional government contracts then the need for technical illustrators will increase rapidly.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



## Y O U A R E A T E L E P H O N E O P E R A T O R

WHAT DO TELEPHONE OPERATORS DO?

CENTRAL OFFICE OPERATORS WORK FOR TELEPHONE COMPANIES.

THEY:

1. Are usually contacted when callers need assistance
2. Frequently give assistance for long distance calls
3. Help callers find telephone numbers and give other information
4. May contact the police for a caller in an emergency
5. May assist a blind person who is unable to dial for himself
6. Insert and remove plugs from the switchboard and manipulate keys and dials

PRIVATE BRANCH EXCHANGE (PBX) OPERATORS OPERATE SWITCHBOARDS WHICH ARE USED IN BUSINESS OFFICES AND OTHER ESTABLISHMENTS.

THEY:

1. Answer calls and relay them to the proper party
2. Make connections for inter-office calls
3. Insert and remove plugs from the switchboard and manipulate keys and dials
4. Give company information
5. May perform clerical duties

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WHAT SHOULD TELEPHONE OPERATORS BE LIKE?**THEY SHOULD BE:**

1. Patient
2. Polite
3. Fast
4. Tactful

**THEY SHOULD HAVE:**

1. Good eye-hand coordination
2. Good vision and hearing
3. A pleasant speaking voice

**THEY SHOULD BE ABLE TO:**

1. Do monotonous work
2. Work well in spite of interruptions
3. Sit for long periods of time
4. Work rapidly and accurately

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are speech, business courses, arithmetic, and English.

**AFTER HIGH SCHOOL:**

1. A high school diploma is usually required.
2. Training is usually received on the job. Most telephone companies require applicants to pass an aptitude test.
3. Clerical skills are desirable and may be required.

HOW MUCH MONEY WILL YOU MAKE?

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1. In 1966 telephone operators in Utah earned an average salary of \$70 per week.
2. Their starting salary was \$60 per week.
3. Some telephone operators earned as much as \$100 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Operators sit at switchboards most of the time.
2. Working space is often cramped.
3. The job requires constant reaching, pulling and pushing, to insert and remove plugs.
4. Operators may be required to work nights and weekends.

WHERE IN UTAH WILL YOU WORK?

GEOGRAPHICAL LOCATION:

Most telephone operators in Utah work in Salt Lake, Davis, Utah and Weber counties.

TYPE OF INDUSTRY:

Telephone operators are employed by telephone companies, business and professional offices, hospitals, stores, manufacturing plants, and a variety of federal, state, and local governmental agencies.

Vocational Information For Education and Work

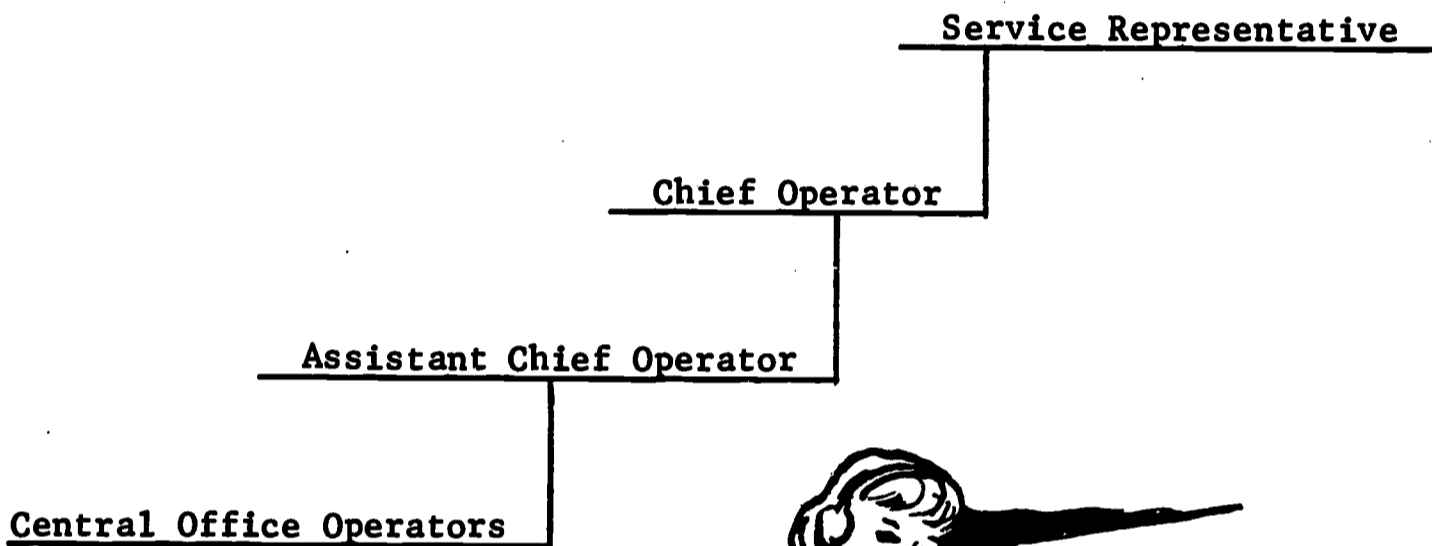
Telephone Operator - DOT Code 235.862  
(July 67)

IS THERE A NEED FOR TELEPHONE OPERATORS IN UTAH?

- 1. In 1965 there were 1,550 telephone operators in Utah. It is predicted that by 1970 this number will increase to 1,700.

CAN YOU ADVANCE?

(advancement opportunities are very limited for PBX operators.)



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



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YOU ARE A TILE SETTER -  
MARBLE SETTER - TERRAZZO WORKER

WHAT DO TILE SETTERS, MARBLE SETTERS, AND TERRAZZO  
WORKERS DO?

**TILE SETTERS:**

1. Apply a coat of cement to the surface to be covered
2. Place the tile according to a definite pattern and tap it in place with a trowel handle
3. Cut or chip tile with hammers, chisels, and pincers to make it fit into irregular places such as corners
4. Fill the joints with mortar after the tile setting is completed.

**MARBLE SETTERS:**

1. Apply a special plaster mixture to the surface to be covered
2. Set the marble slabs or pieces in place, bracing them until the plaster has hardened
3. Pour a special plaster into the joints between the marble pieces.

**TERRAZZO WORKERS:**

1. Cover the floor area with a layer of concrete
2. Place metal strips in the concrete to prevent cracking in the floor and to separate different colors
3. Spread a mixture of concrete and marble chip (terrazzo) on the concrete base
4. Level and smooth the mixture with hand tools.

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WHAT SHOULD TILE SETTERS BE LIKE?

## THEY SHOULD BE:

1. In good physical condition
2. Accurate
3. Agile
4. Persistent

## THEY SHOULD HAVE:

1. A sense of color harmony
2. An eye for straight lines
3. Good finger coordination
4. Good eye-hand coordination

## THEY SHOULD BE ABLE TO:

1. Climb, stoop, crouch, reach, push, and pull
2. Pay close attention to detail
3. Do medium to heavy work
4. Follow drawings and blueprints

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are shop, art, mechanical drawing, and arithmetic.

## AFTER HIGH SCHOOL:

1. The best way to train for this job is as an apprentice. As an apprentice you will receive three years of supervised on-the-job training and related classroom instruction.
2. Some workers learn this trade on the job without following any formal training. They are known as helpers. Helpers do not advance as fast as apprentices.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, tile setters in Utah earned approximately \$4.10 per hour.
2. Marble setters and terrazzo workers earned approximately \$3.75 per hour.
3. Apprentices begin at a little over half the regular worker's salary.

WHAT ARE WORKING CONDITIONS LIKE?

1. Some of your work will be done inside and some outside.
2. You are often exposed to the dirt, dust, and dampness of new construction sites.
3. At times, you may have to work in cramped quarters.
4. There is danger of slipping on wet surfaces, falling from ladders and scaffolding, and injuries from heavy stone.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

90% of Utah's tile setters work in the Wasatch Front area of Box Elder, Weber, Davis, Utah, and Salt Lake counties. They may have to travel to other parts of the state, however, to distant construction locations.

**TYPE OF INDUSTRY:**

The construction industry employs practically all tile setters, marble setters, and terrazzo workers. Some to maintenance work at large factories.

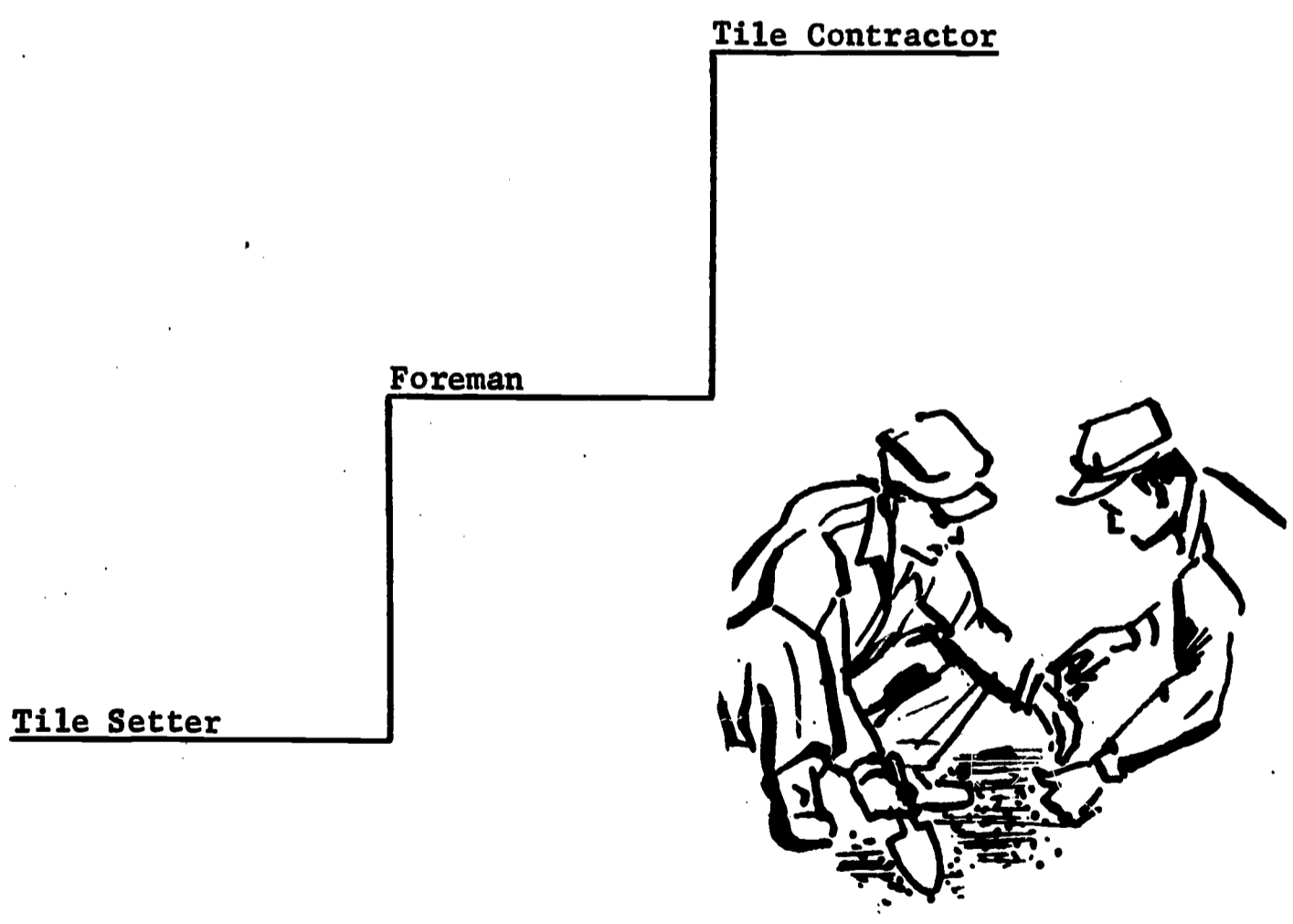
**Vocational Information For Education and Work**

Tile Setter-Marble Setter-Terrazzo Worker -- DOT Code 861.781  
(July 1967)

IS THERE A NEED FOR TILE SETTERS IN UTAH?

- 1. In 1965, there were 205 tile setters in Utah. It is predicted that by 1970 this number will increase to 258.
- 2. The need for tile setters will increase as the construction industry grows. The increase will not be too great because of other materials being used more and more in place of tile.

CAN YOU ADVANCE?



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**Utah State Board of Education**  
**Utah State Department of Employment Security**



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## YOU ARE A TOOL AND DIE MAKER

WHAT DO TOOL AND DIE MAKERS DO?

## THEY:

1. Use machines to make devices which hold metal, called jigs and fixtures, while it is being shaved, stamped, or drilled
2. Construct metal forms, called dies, which are used in stamping and forging operations to shape metal
3. Make metal molds used in die casting and molding plastics
4. Repair dies, guages, jigs, and fixtures
5. May help design tools and dies

TOOL AND DIE MAKERS ARE USUALLY THE MOST SKILLED WORKERS IN A MACHINE SHOP.

## THEY:

1. Must have a broad knowledge of machining operations, shop practices, mathematics, and blueprint reading
2. Work with very close tolerances and do very precise handwork
3. Use almost every type of machine tool and precision measuring instrument in a machine shop
4. Work with all metals and alloys commonly used in manufacturing

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WHAT SHOULD TOOL AND DIE MAKERS BE LIKE?

**THEY SHOULD BE:**

1. Mechanically inclined
2. Precise in their work
3. Skillful in the use of their hands
4. Dependable

**THEY SHOULD HAVE:**

1. Good eye-hand coordination
2. A concern for detail
3. Normal vision
4. Ability to use tools

**THEY SHOULD BE ABLE TO:**

1. Stand for long periods of time
2. Do extremely accurate work
3. Concentrate on details for long periods of time
4. Read blueprints

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are mathematics, shop courses, mechanical drawing, and English.

**AFTER HIGH SCHOOL:**

Most employers require a high school diploma. The best way to train for this job is as an apprentice. As an apprentice you will receive on-the-job training and related classroom instruction. After four years as an apprentice, you may become a fully qualified worker called a journeyman.

### HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 tool and die makers in Utah made an average wage of \$3.20 per hour.
2. The starting salary for apprentices was \$1.60 per hour.
3. Some tool and die makers earned as much as \$4.50 per hour.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Most machine shops are relatively clean and well lighted.
2. The work is usually not strenuous.
3. Working around machines can be dangerous unless safety regulations are strictly followed.
4. Employees are usually required to wear goggles to prevent injuries from flying metal chips.

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION:

The majority of tool and die makers in Utah work in the five-county Wasatch Front area surrounding Salt Lake City, Ogden, and Provo.

#### TYPE OF INDUSTRY:

1. The majority of Utah's tool and die makers are employed in the metal working industries involved in manufacturing.
2. Custom machine shops are a major employer of tool and die makers.

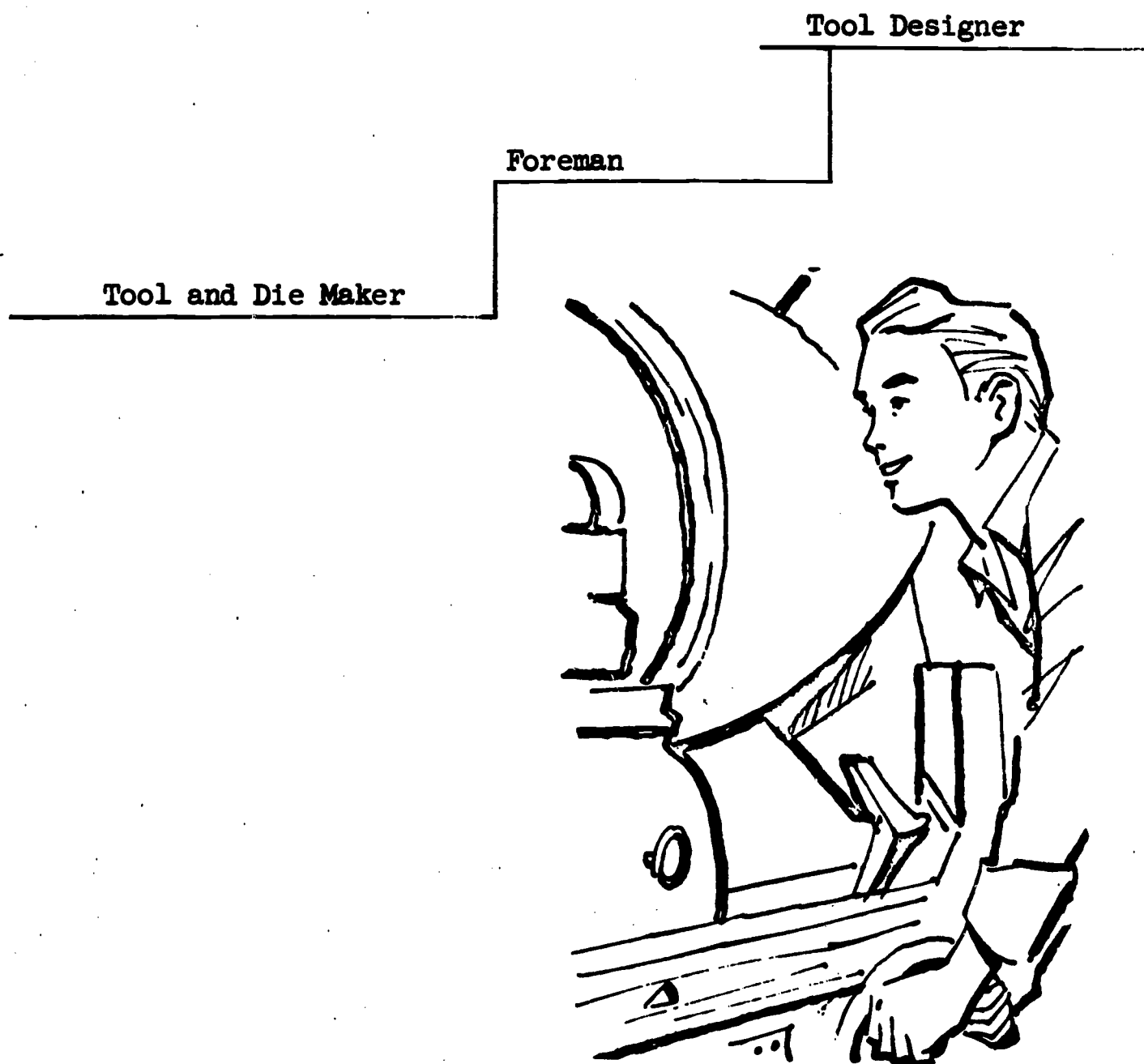
## Vocational Information For Education and Work

Tool and Die Maker - Dot Code 601.280  
(July 67)

IS THERE A NEED FOR TOOL AND DIE MAKERS?

1. In 1965 there were 2,130 tool and die makers in Utah. It is predicted that by 1970 this number will increase to 2,600.
2. There is a constant demand for tool and die makers with a high degree of skill.

CAN YOU ADVANCE?



**Prepared Cooperatively By:  
Utah State Board of Education  
Utah State Department of Employment Security**



WHAT DO TRUCK DRIVERS DO?

LONG-HAUL TRUCK DRIVERS USUALLY OPERATE LARGE TRACTOR TRAILOR TRUCKS OVER LONG DISTANCES.

THEY:

1. Operate large, expensive carriers that often cost from \$20,000 to \$40,000
2. Spend most of their time driving, stopping infrequently
3. Usually do not load or unload their own trucks
4. Must operate complicated equipment such as dual axles, multiple speed gearshifts, air brakes, etc.
5. Skillfully guide the large trucks around corners, through narrow underpasses, or up to loading platforms
6. May spend several days on the road, traveling over several states
7. May work in teams of two drivers, one driving while the other sleeps

LOCAL TRUCK DRIVERS TRANSPORT CONSUMER GOODS FROM TERMINALS, WAREHOUSES, AND FACTORIES TO WHOLESALERS, RETAILERS AND CONSUMERS IN LOCAL AREAS.

THEY MAY ALSO:

1. Receive delivery and pickup assignments each day
2. Usually do not load their own trucks, but must frequently unload the trucks that they drive
3. Have customers sign receipts, and may collect money when deliveries are made
4. Usually do not spend more than one day on the road
5. Make frequent stops

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WHAT SHOULD TRUCK DRIVERS BE LIKE?**THEY SHOULD BE**

1. Responsible
2. Dependable
3. Emotionally stable
4. Industrious

**THEY SHOULD HAVE:**

1. Good vision and hearing
2. Good eye-hand coordination
3. Ability to judge speed and distance
4. Quick reflexes

**THEY SHOULD BE ABLE TO:**

1. Sit for long periods of time
2. Remain alert while doing monotonous work
3. Pay attention to details
4. Respond quickly to signals that are seen or heard

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?**IN HIGH SCHOOL:**

Subjects that will help you prepare for this job are driver training, auto shop, arithmetic, and English.

**AFTER HIGH SCHOOL:**

1. A high school diploma is not required but is helpful in obtaining a position.
2. A chauffeur's license is required.
3. Training is received on the job for local truck drivers; driving experience in non-commercial trucks is helpful.
4. Most long-haul truck drivers have received experience driving trucks locally.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average wage for long-haul truck drivers was \$3.50 per hour. Local truck drivers made considerably less.
2. The starting salary for local truck drivers was \$1.65 per hour.
3. Some long-haul truck drivers earned as much as \$5.50 per hour.
4. Some local drivers earned as much as \$3.50 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. Night work is usually necessary for long haul drivers.
2. Most local drivers have regular delivery routes.
3. Long haul drivers may remain with the truck for over a 100 hours at a time, driving 10 hours and sleeping 8.
4. Sitting in one place for hours at a time is physically tiring.
5. Driving for long periods of time at night is also tiring.
6. Some drivers develop back strain.

WHERE IN UTAH WILL YOU WORK?**GEOGRAPHICAL LOCATION:**

Most truck drivers in Utah are employed by firms located in Salt Lake, Weber, Utah, and Davis counties.

**TYPE OF INDUSTRY:**

1. Local truck drivers are employed mainly by businesses which deliver their own products such as retailers, wholesalers, construction and oil companies, and meat and food distributors.
2. Long-haul truck drivers are employed by freight lines, moving companies, and other large companies which ship their products long distances.

**Vocational Information For Education and Work**

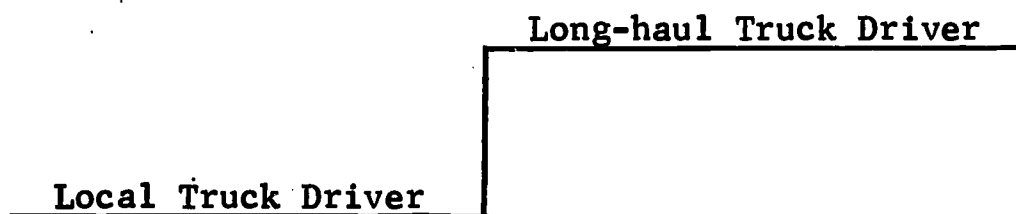
Truck Driver - DOT Code 904.883  
(July 67)

IS THERE A NEED FOR TRUCK DRIVERS IN UTAH?

1. In 1965 there were 5,775 truck drivers in Utah. It is predicted that by 1970 this number will increase to 6,525.

CAN YOU ADVANCE?

Advancement opportunities are very limited. Most promotions are to better driving routes and to higher pay.



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**YOU ARE A RADIO & TELEVISION SERVICEMAN****WHAT DO RADIO AND TELEVISION SERVICEMEN DO?****THEY REPAIR RADIOS AND TELEVISIONS THAT DO NOT WORK PROPERLY BY:**

1. Asking the customer what is wrong with the set
2. Turning on the set to look and listen for signs of what is wrong
3. Looking for common sources of trouble such as tube failures, loose connections, and burned or worn out parts
4. Using special equipment and testing methods to check for trouble that is not easily found
5. Finding the trouble area, then making the necessary repairs and adjustments
6. Taking the appliance apart, when necessary, to replace worn out parts

**THEY INSTALL TELEVISION SETS BY:**

1. Selecting the proper type of antenna
2. Putting the antenna together and fastening it on the customer's roof or in his attic
3. Drilling holes through which they run a wire to connect the antenna and television set

**THEY MAY ALSO:**

1. Do repair work on stereos, hi-fis, phonographs and tape recorders
2. Specialize in repairing one type of equipment such as color televisions, car radios, etc.
3. Give customers advice and answer their questions on how to take care of their sets
4. Do some selling of radios and televisions.



WHAT SHOULD RADIO AND TELEVISION SERVICEMEN BE LIKE?

**THEY SHOULD BE**

1. Honest
2. Dependable
3. Accurate and precise
4. Courteous
5. Neat and clean
6. Agile and strong

**THEY SHOULD HAVE**

1. Mechanical ability
2. A knowledge of electricity
3. Good finger coordination
4. Normal vision and hearing
5. Normal use of arms and hands

**THEY SHOULD BE ABLE TO:**

1. Climb a ladder while carrying tools and an antenna and work on roof tops
2. Do a variety of electrical repair jobs
3. Get along well with people
4. Use their eyes in close work
5. Do accurate detail work
6. Find trouble areas in radios and televisions in a short amount of time
7. Drive a small truck
8. Do some heavy lifting

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

**IN HIGH SCHOOL:**

Subjects that will help prepare you for this job are electricity, algebra, physics, shop, and mechanical drawing.

**AFTER HIGH SCHOOL:**

1. Radio and television servicemen learn their trade through on-the-job training and work experience. It generally takes from three to four years to become a qualified repairman.
2. Utah Trade Tech in Salt Lake and Provo offer a one-year course in electricity which would be very helpful.

### HOW MUCH MONEY WILL YOU MAKE?

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1. In 1966 the starting salary for beginning radio and television servicemen was from \$1.50 to \$2.50 an hour.
2. The fully qualified radio and television serviceman earned from \$2.50 to \$4.00 an hour depending upon where he worked, the type of sets he repaired, his skill, and length of time employed.
3. Some servicemen receive commissions on sales they make of radios and televisions.

### WHAT ARE WORKING CONDITIONS LIKE?

1. Repair shops are generally quiet, well-lighted, and well-ventilated.
2. You will spend much of your time, while in the repair shop, working at a bench.
3. Depending upon where you work, you may spend quite a bit of time making house calls to do repair work on the spot. This may involve several hours a day of driving.
4. If you are careless, there is danger of shocks or burns from handling electrical parts. There is also danger of falls from roofs while installing or repairing antennas.
5. You may, at times, have to work outdoors in bad weather to repair or install antennas.
6. You will do your work with very little supervision.

### WHERE IN UTAH WILL YOU WORK?

#### GEOGRAPHICAL LOCATION:

There is generally a radio and television serviceman in every community of 3,000 or more people. Most of them, however, are found in the large population centers of Salt Lake, Ogden, Provo, and Logan.

#### TYPE OF INDUSTRY:

Small repair shops, service centers connected with companies that make or distribute radios and televisions, and large furniture stores employ many servicemen. Approximately one-third of all servicemen work for themselves.

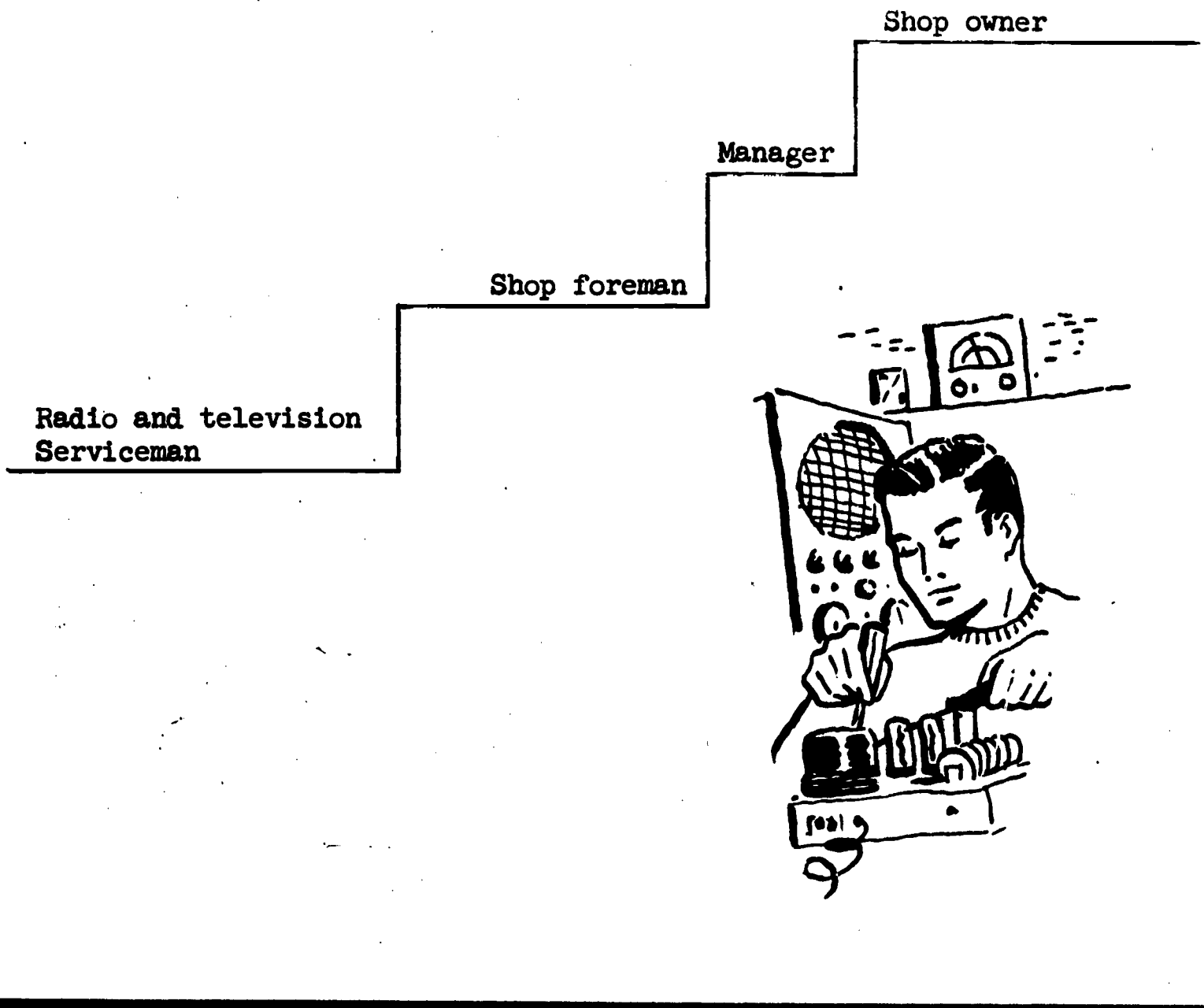
## Vocational Information For Education and Work

Radio and Television Serviceman - DOT Code 720.281  
( July 67)

IS THERE A NEED FOR RADIO AND TELEVISION SERVICEMEN IN UTAH?

- 1. In 1965 there were approximately 254 radio and television servicemen in Utah. It is predicted that by 1970, this number will increase to 337.
- 2. The need for radio and television servicemen will continue to rise due to the increase in the number of radios and televisions in use today.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
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**Utah State Department of Employment Security**



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## YOU ARE AN UPHOLSTERER

WHAT DO UPHOLSTERERS DO?

THEY COVER FURNITURE WITH DIFFERENT KINDS OF FABRICS.

THEY:

1. Fasten wire webbing to the wooden frames of furniture
2. Tie coil springs to the frame and webbing and tack a heavy burlap cover to the framework
3. Sew padding and filler to the burlap then cover it with unbleached muslin
4. Lay out a pattern on the cover fabric and cut it with hand shears or a cutting machine
5. Put the cover fabric over the padded frame and tack it in place
6. Cover the seat cushions and put on any decorative trimming material called for.

THEY MAY ALSO:

1. Reupholster furniture by removing the worn covering, and if necessary, the padding, springs, and webbing, then rebuilding it as described above or simply recovering it
2. Cover and repair car, bus, train, and airplane seats
3. If they work for a small shop, take the customer's order, quote him a price, and pick up and deliver his furniture
4. If they work for a large furniture manufacturer, specialize in one part of the upholstering process.

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WHAT SHOULD UPHOLSTERERS BE LIKE?

## THEY SHOULD BE:

1. "Tack"tful
2. Patient
3. Neat and precise
4. Proud of their work

## THEY SHOULD HAVE:

1. Good eyesight
2. Good color vision
3. Good hand and finger coordination
4. Good judgment of form

## THEY SHOULD BE ABLE TO:

1. Bend, stoop, lift, and pull
2. Do some strenuous lifting
3. Visualize the finished product at the start of the job.

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are wood shop, business, English, and mathematics.

## AFTER HIGH SCHOOL:

1. Most employers prefer to hire high school graduates.
2. The best way to train for this job is as an apprentice. This includes three years of supervised training and instruction.
3. The apprenticeship program is not always available in upholstery. If not you will be trained on the job. Utah Technical College, Salt Lake offers a course in upholstery and Utah Technical College Provo offers a course in power sewing which would help you learn your job faster.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, the average pay for upholsterers in Utah was from \$2.50 - \$3.00 an hour.
2. Their beginning wage was from \$1.80 - \$2.20 an hour.
3. Some upholsterers working for themselves in their own shops earned as much as \$4.50 an hour or above. However, their earnings depend upon the amount of work they have, the number of customers, and the type of work they have, the number of customers, and the type of work they do. Some go broke!
4. Some upholsterers working in custom shops are also paid on a commission basis or according to how many pieces of furniture they cover.

WHAT ARE WORKING CONDITIONS LIKE?

1. Conditions will vary from shop to shop, from small cluttered working areas to large well kept areas. Most shops are well lighted.
2. Small injuries may result from power cutting and sewing machines.
3. You might have to spend part of the day with tacks in your mouth.
4. The work is not physically hard except for some lifting.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The large majority of Utah's upholsterers work in the Wasatch Front area of Box Elder, Weber, Davis, Salt Lake, and Utah Counties.

## TYPE OF INDUSTRY:

Custom upholstery shops, reupholstery shops, furniture manufacturers, and automobile and transportation service shops employ the majority of upholsterers.

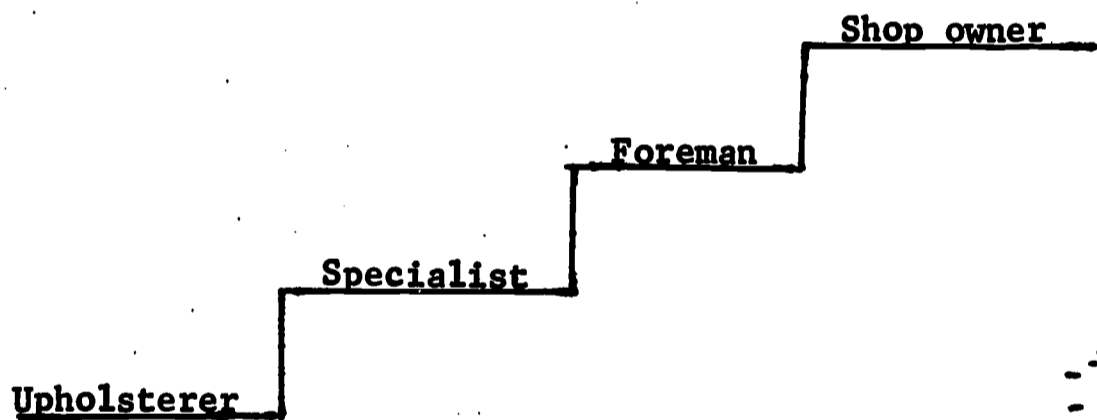
Vocational Information For Education and Work

Upholsterer - DOT Code 780.381  
(July 67)

IS THERE A NEED FOR UPHOLSTERERS IN UTAH?

1. In 1965, there were 134 upholsterers in Utah. It is predicted that by 1970 this number will increase to 171.
2. The need for upholsterers will increase slowly.

CAN YOU ADVANCE?



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**YOU ARE A WAITRESS (WAITER)****WHAT DO WAITRESSES DO?**

**THEY SERVE FOOD AND BEVERAGES TO CUSTOMERS.**

**THEY:**

1. Take the customer's order, answer questions about the menu, and make suggestions about what customers might order.
2. Relay the orders to the kitchen.
3. Carry food from the kitchen, using their arms or trays.
4. Carefully serve the food to the customers
5. Give any additional service which the customer needs, such as filling water glasses or coffee cups or suggesting a dessert.

**THEY MAY ALSO:**

1. Clear away the dishes and set the table for the next customer.
2. Make coffee, mix fountain drinks, fill sugar bowls, and have other related duties.
3. Act as a cashier.
4. Have other general cleaning duties.



WHAT SHOULD WAITRESSES BE LIKE?

## THEY SHOULD BE:

1. Patient
2. Courteous
3. Fast
4. Agreeable
5. Enthusiastic

## THEY SHOULD HAVE:

1. A neat appearance
2. A liking for people
3. Normal hearing
4. Good eye-hand coordination
5. Steady hands

THEY SHOULD BE ABLE TO:

1. Stand for long periods of time
2. Take care of many details
3. Do neat and precise work
4. Get along well with others

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are health, home economics, arithmetic, speech, and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is not required, but will be helpful in obtaining a position.
2. Training will be received on the job.
3. Larger restaurants usually require experienced waitresses. Most smaller establishments do not.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 the average wage for waitresses in Utah was \$1.30 per hour.
2. Waitresses usually earn a substantial amount in tips; as much as \$3.00 per hour.

WHAT ARE WORKING CONDITIONS LIKE?

1. The work is very demanding, requiring physical stamina.
2. During rush periods there is a great deal of pressure.
3. Customers can be very demanding.
4. Night work is often involved.
5. Working surroundings vary from a dingy bar and grill to an exclusive restaurant.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

The majority of Utah's waitresses work in Salt Lake, Davis, Utah, Weber and Box Elder counties. Opportunities for employment are found in various areas throughout the state.

## TYPE OF INDUSTRY:

Waitresses are employed in restaurants, drive-ins, hotels, motels, and various types of eating establishments.

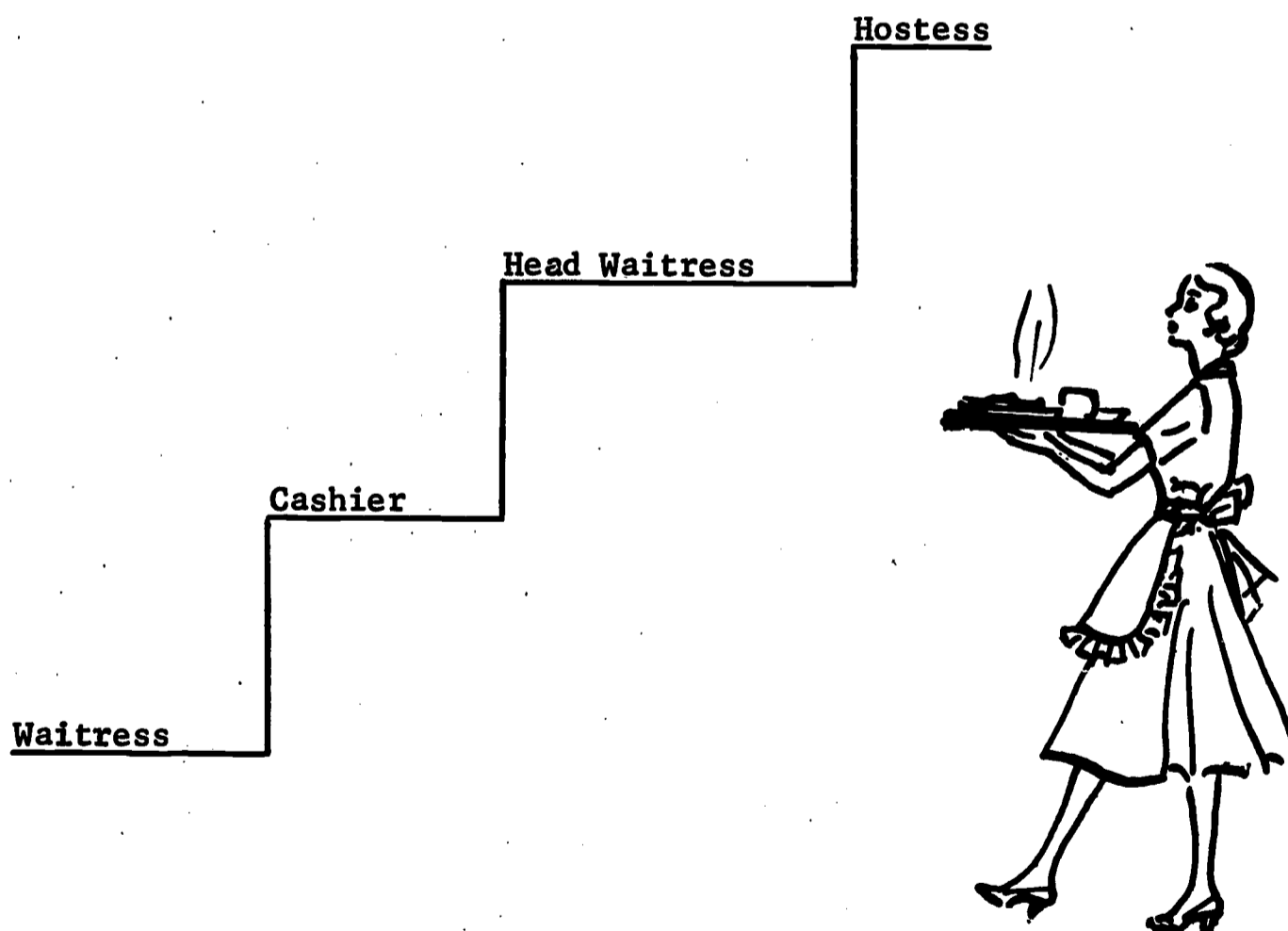
Vocational Information For Education and Work

Waitress (Waiter) DOT Code 311.878 (July 1967)

IS THERE A NEED FOR WAITRESSES IN UTAH?

1. In 1965 there were approximately 5,000 waitresses in Utah (about 150 waiters). It is predicted that by 1970 this number will increase to 6,100.
2. There is a high rate of turnover in this occupation and a constant demand for workers.

CAN YOU ADVANCE?



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YOU ARE A WATCH REPAIRMAN

YOU ARE A JEWELER

WHAT DO WATCH REPAIRMEN AND JEWELERS DO?

THEY:

1. Remove the watchcase and disassemble the various parts.
2. Examine the parts through a magnifying glass
3. Clean the parts by placing them in a cleaning machine where they are washed and rinsed
4. Replace defective parts
5. Oil the moving parts
6. Reassemble the watch and test it for accuracy.

JEWELERS MAKE AND REPAIR JEWELRY --

THEY:

1. Solder broken parts, make new parts, enlarge or reduce the size of rings, reset stones, and restyle old jewelry
  2. May follow their own designs or one already prepared when making jewelry
  3. Shape metal by hand by drilling, cutting, filing, etc.
  4. Melt metals such as gold or platinum, and pour the metal into a mold of desired shape
  5. May specialize in making a particular type of jewelry.
- ERIC  
Full Text Provided by ERIC

WHAT SHOULD WATCH REPAIRMEN/JEWELERS BE LIKE?

## THEY SHOULD BE:

1. Precise
2. Patient
3. Accurate
4. Proud of their work
5. Creative

## THEY SHOULD HAVE:

1. A concern for detail
2. Good finger coordination
3. Good vision
4. Initiative

THEY SHOULD BE ABLE TO:

1. Concentrate on details
2. Do neat and precise work
3. Work with very delicate parts

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are art, shop courses, mechanical drawing, arithmetic and English.

## AFTER HIGH SCHOOL:

1. A high school diploma is usually required
2. Most watchmakers and jewelers in Utah have learned the trade by working in jewelry stores and assisting watch repairmen and jewelers.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966 watch repairmen and jewelers earned an average wage of \$140 per week.
2. Their starting salary was \$80 per week.
3. Some watch repairman and jewelers earned as much as \$200 per week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Working conditions are generally pleasant
2. The work may be hard on your eyes
3. Watch repairmen and jewelers are not usually required to move about much
4. Most workers enjoy their work.

WHERE IN UTAH WILL YOU WORK?

**GEOGRAPHICAL LOCATION:**

Most watch repairmen and jewelers in Utah work in Salt Lake, Davis, Utah, Weber, and Box Elder counties.

**TYPE OF INDUSTRY:**

Watch repairmen and jewelers are employed by jewelry stores, department stores, and private shops.

IS THERE A NEED FOR WATCH REPAIRMEN AND JEWELERS IN UTAH?

1. In 1965 there were 160 watch repairmen and jewelers in Utah. It is predicted that by 1970 this number will increase to 175.

CAN YOU ADVANCE?

Opportunities for advancement are very limited.

Private Repair Shop Owner



Watch Repairman and Jeweler

Prepared Cooperatively By:  
 Utah State Board of Education  
 Utah State Department of Employment Security



**YOU ARE A WELDER****WHAT DO WELDERS DO?**

THEY JOIN PIECES OF METAL TOGETHER BY APPLYING HEAT, PRESSURE, OR BOTH, TO PRODUCE A PERMANENT BOND.

**THEY:**

1. Check their equipment for safety before they begin welding
2. Use blueprints or job orders to set up the work correctly
3. May mark the metal where it is to be cut or joined
4. Set the voltage and amperage controls for arc welding, or adjust the gas pressure and flow for acetylene welding
5. Hold the torch or electrode next to the metal until it begins to melt
6. Move the flame or arc along the seam or edge of the work.

**THEY MAY ALSO:**

1. Cut metal with a torch or bond metals by braizing or soldering
2. Weld aluminum and other hard-to-weld metals using special equipment
3. Specialize in particular type of welding

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WHAT SHOULD WELDERS BE LIKE?

## THEY SHOULD BE:

1. Accurate
2. Patient
3. Physically fit
4. Industrious

## THEY SHOULD HAVE:

1. Good eye-hand coordination
2. Full use of both hands
3. A good sense of balance
4. Steady hands

## THEY SHOULD BE ABLE TO:

1. Work in awkward positions
2. Lift, push and pull heavy objects
3. Tolerate noisy, drafty, and dirty surroundings
4. Do precise and exacting work.

(For a detailed description of your capabilities, see your counselor).

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help you prepare for this job are physics, mathematics, mechanical drawing, metal shop, and welding.

## AFTER HIGH SCHOOL:

1. A high school diploma is usually required
2. The best way to prepare for this job is as an apprentice. As an apprentice you will receive on-the-job training and related classroom instruction. After three years as an apprentice you may become a fully qualified worker called a journeyman
3. Some welders have worked as helpers and received employment as welders after gaining experience.

**HOW MUCH MONEY WILL YOU MAKE?**

1. In 1966 welders earned an average wage of \$3.50 per hour.
2. Their starting wage was \$2.00 per hour.
3. Some welders earned as much as \$4.50 per hour.

**WHAT ARE WORKING CONDITIONS LIKE?**

1. Much of the work is done in confined spaces.
2. Hazards of the work include eye injuries from intense light, burns, fires, possible explosions, and electric shocks.
3. Physical exertion is often required.
4. Welders may work from scaffolds at times.
5. There are fumes and smoke created in the welding process.

**WHERE IN UTAH WILL YOU WORK?****GEOGRAPHICAL LOCATION:**

Approximately 80% of the welders in Utah work in Salt Lake, Utah, Davis and Weber Counties.

**TYPE OF INDUSTRY:**

Welders are employed by steel mills, manufacturing plants, custom welding shops, railroads, utility companies, and government agencies.

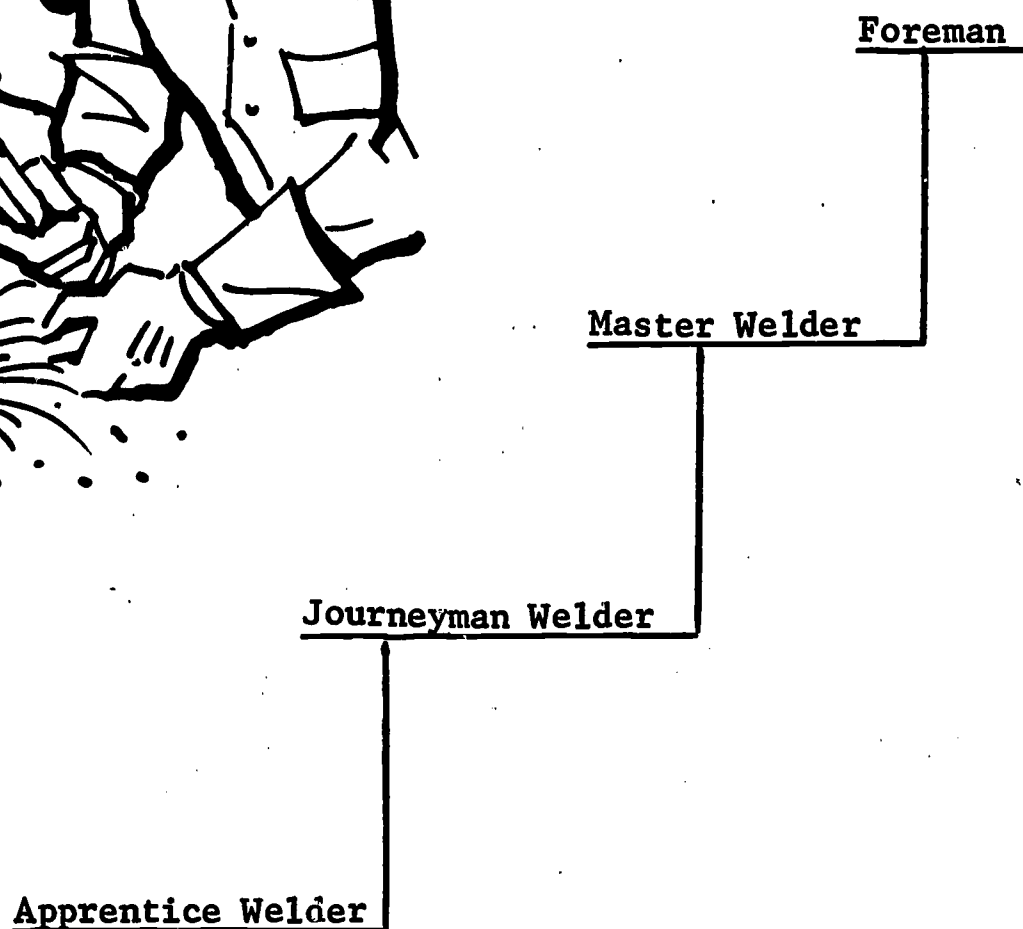
**Vocational Information For Education and Work**

Welder - DOT Code 812.884 (July 1967)

IS THERE A NEED FOR WELDERS IN UTAH?

1. In 1965 there were 1000 welders in Utah. It is predicted that by 1970 this number will increase to 1100.
2. There is a high demand for skilled welders who can read blueprints, set up their own work, and are familiar with the different types of welding equipment.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



**YOU ARE A WHOLESALE SALESMAN****WHAT DO WHOLESALE SALESMEN DO?**

THEY REPRESENT WHOLESALE FIRMS WHICH SELL THE PRODUCTS OF MANY DIFFERENT COMPANIES TO ALL TYPES OF BUYERS.

**THEY:**

1. Make regular visits to buyers for retail stores, industrial companies, schools, hospitals, and other large establishments
2. Show the buyers samples, pictures, and catalogs of the items they handle and try to create an interest in their line of products
3. Do not generally try to sell any one particular product but rather they try to persuade buyers to become regular customers of the wholesale firm they represent
4. Sell buyers on the advantages, prices, and services their firm offers
5. Write orders for the quantity of products desired and send them to the wholesale house
6. Keep their regular customers well supplied at all times, giving them prompt, dependable service
7. Study information about the products they sell in order to be well acquainted with them.

**THEY MAY ALSO:**

1. Check different stores' stock supplies and prepare orders for items that are needed
2. Give advice on how to advertise products and arrange displays
3. Demonstrate how to install and maintain equipment (if that's what they're selling.)
4. Collect money owed to their company

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WHAT SHOULD WHOLESALE SALESMEN BE LIKE?

## THEY SHOULD BE:

1. Dependable
2. Outgoing
3. Friendly
4. Enthusiastic
5. Tactful
6. Patient

## THEY SHOULD HAVE:

1. A pleasing personality
2. A neat appearance
3. Self confidence
4. Good hearing
5. Stable emotions
6. A liking for people

## THEY SHOULD BE ABLE TO:

1. Communicate clearly
2. Get along well with people
3. Treat buyers in a friendly, courteous manner even when they are cool.
4. Travel for long periods of time

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will help prepare you for this job are salesmanship, commercial arithmetic, English, speech, and psychology.

## AFTER HIGH SCHOOL

1. Most employers require a high school diploma but no additional schooling. You will receive your training on the job.
2. Experience in saleswork is important in finding a job. Wholesale salesmen generally begin as sales trainees or work in a non-selling department for two years or more.
3. Although natural sales ability is the most important quality for advancement, courses in marketing and selling, offered at any of Utah's colleges, junior colleges, and technical colleges, will help you find better positions.

HOW MUCH MONEY WILL YOU MAKE?

1. Your salary will depend upon the type of article you sell and your ability to sell. Most wholesale salesmen receive a certain percentage of their sales called a commission.
2. The average earnings for a beginning wholesale salesman are from \$450 - \$550 a month.
3. The average earnings of experienced wholesale salesmen are from \$550 - \$1,000 a month depending upon their sales ability. The best salesmen may make as much as \$1,200 or more a month.
4. In probably no other field, not requiring a college education, can a person advance as fast or earn as much, if he has a real "knack" for selling, as he can in sales work.

WHAT ARE WORKING CONDITIONS LIKE?

1. You will often work long, irregular hours.
2. You will spend much of your time traveling, and may have to travel nights and weekends if your territory is large.
3. You will have reports and orders to fill out which may have to be done in the evening.
4. Selling can be very competitive and also discouraging at times.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Wholesale firms are generally located in large cities but your territory may extend throughout the whole state and into neighboring states.

## TYPE OF INDUSTRY:

Wholesale companies that sell food and food products, drugs, clothing, dry goods, automobiles, electrical appliances, building material, and equipment employ the majority of wholesale salesmen.

**Vocational Information For Education and Work**

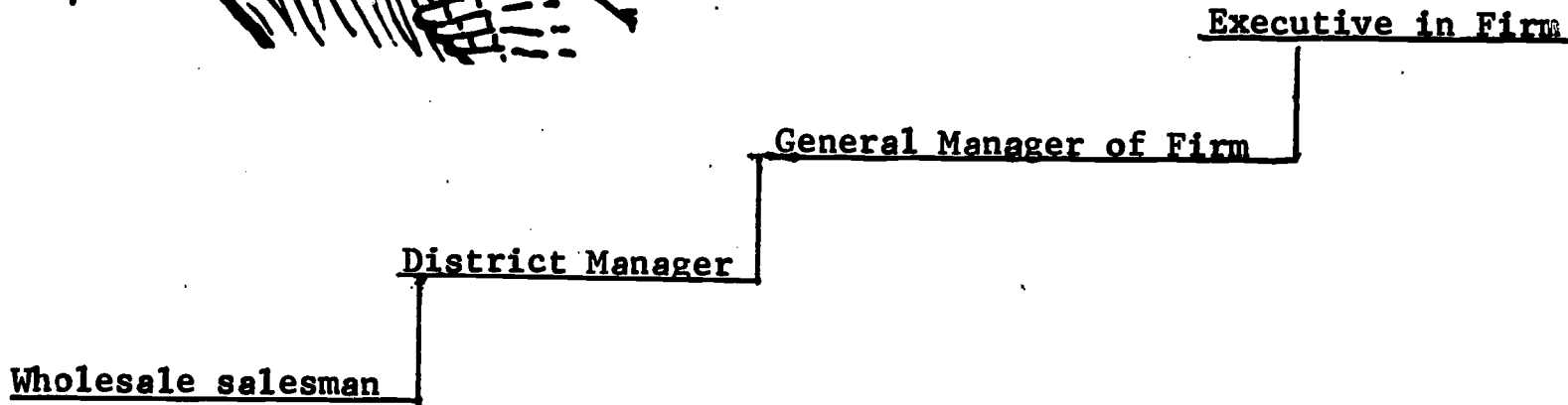
Wholesale Salesman - DOT Code 260 to 289.068

(July 67)

IS THERE A NEED FOR WHOLESAL SALES MEN IN UTAH?

- 1. In 1965, there were 2844 wholesale salesmen in Utah. It is predicted that by 1970, this number will increase to 3,180.
- 2. The need for wholesale salesmen will continue to increase because the amount of business handled by wholesale houses will continue to rise as the population and economy grow.

CAN YOU ADVANCE?



**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



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## YOU ARE AN X - RAY TECHNICIAN

WHAT DO X-RAY TECHNICIANS DO?

## THEY:

1. Set up the X-ray equipment
2. Place the area of the patient's body to be photographed in the correct position between the X-ray tube and the film
3. Cover other areas of the body with lead plates to protect them from the rays
4. Measure the thickness of the area to be photographed
5. Determine the correct voltage, current, and exposure time, regulating the necessary controls accordingly to take the picture
6. Develop and dry the film
7. Keep records of X-rays taken
8. Keep the X-ray equipment in good working order by cleaning it and making minor repairs.

## THEY MAY ALSO:

1. Be called into surgery to X-ray the progress of an operation
2. Use X-ray techniques in the treatment of illnesses such as cancer
3. Prepare radium and other radioactive materials used in the treatment of certain illnesses
4. Chart the reactions of patients under treatment
5. Specialize in a particular area of work such as dental X-ray or chest X-ray
6. Operate special equipment used to X-ray the heart or brain
7. Bind or strap the patient in place to keep him from moving.



WHAT SHOULD X-RAY TECHNICIANS BE LIKE?

## THEY SHOULD BE:

1. Tactful
2. Sympathetic
3. Alert
4. Conscientious
5. Accurate
6. Trustworthy
7. Neat and clean

## THEY SHOULD HAVE:

1. Initiative
2. Good judgment
3. Normal hearing and vision
4. Good color perception
5. Good depth perception
6. No contagious disease

## THEY SHOULD BE ABLE TO:

1. Do their work carefully, knowing that any error might have serious consequences
2. Work directly with people who may be seriously ill or injured
3. Understand and operate electrical equipment
4. Make decisions on their own
5. Work under close supervision and follow instructions exactly
6. Stoop, turn, and do some lifting

YOU CANNOT BE ANEMIC OR HAVE A TENDENCY TOWARDS ANEMIA

(For a detailed description of your capabilities, see your counselor.)

WHAT TRAINING WILL PREPARE YOU?

## IN HIGH SCHOOL:

Subjects that will prepare you for this job are English, physiology, biology, chemistry, physics, mathematics, typing and electronics.

## AFTER HIGH SCHOOL:

1. Hospitals and medical schools offer training programs for X-ray technicians. The University of Utah in connection with the University Hospital, and Weber College in connection with the Thomas Dee Hospital, as well as the L.D.S. , Holy Cross, St. Marks, St. Benedict, and Utah Valley Hospitals have such programs.
2. Most training programs last for two years.

HOW MUCH MONEY WILL YOU MAKE?

1. In 1966, medical X-ray technicians in Utah made from \$90 \$110 a week, depending upon their experience and skill
2. Their starting salary was from \$75 - \$90 a week .
3. Some X-ray technicians made as much as \$125 a week.

WHAT ARE WORKING CONDITIONS LIKE?

1. Hospital and clinical surroundings are sanitary and generally modern.
2. X-rays may be harmful if you are exposed to them over a long period of time. Therefore, you may wear protective clothing and most of the time will operate your equipment from a shielded room.
3. You may be required to have frequent blood tests.
4. At times, you may be on a "24 hour" call, work late evening shifts, or work weekends and holidays.

WHERE IN UTAH WILL YOU WORK?

## GEOGRAPHICAL LOCATION:

Most X-ray technicians work in the Salt Lake-Ogden-Provo area. Some find work in smaller hospitals and clinics throughout the state.

## TYPE OF PLACE:

Hospitals, medical clinics, health clinics, doctors' and dentists' offices, public health offices, research centers and private medical laboratories employ the majority of X-ray technicians.

Vocational Information For Education and Work

DOT CODE #070.108

IS THERE A NEED FOR X-RAY TECHNICIANS IN UTAH?

- 1. In 1965, there were 159 X-ray technicians in Utah. It is predicted that by 1970 this number will increase to 241.
- 2. The need for X-ray technicians will continue to rise due to the increase in X-ray equipment being used in diagnosis and treatment of illnesses.
- 3. This field is open to men and women.

CAN YOU ADVANCE?

There is practically no opportunity for advancement in small clinics or offices, but in a hospital you may advance as shown below:



Radiation Protection Specialist

Chief X-ray Technician

X-ray Technician

**Prepared Cooperatively By:**  
**Utah State Board of Education**  
**Utah State Department of Employment Security**



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