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VOCATIONAL GUIDANCE FOR
ARIZONA HIGH SCHOOLS

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A PLAN OF VOCATIONAL GUIDANCE FOR ARIZONA HIGH SCHOOLS
WITH PARTICULAR EMPHASIS UPON ITS ECONOMIC PHASES

by

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A Thesis

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PREFACE

The purpose of this thesis was to develop a plan of vocational guidance suitable for Yuma High School. In order to help carry out more successfully the above purpose, a syllabus was prepared for use by the teacher and a workbook for the students.

The material has been grouped into the following divisions: Part One is a brief statement of the problem and the methods used to develop the material. Part Two is a syllabus in which a number of occupations important in the Southwest were investigated. Part Three is the student's workbook. The workbook, in turn, has been divided into three parts: Part One, dealing with general introductory considerations; Part Two, consisting of a survey of vocations important in the Southwest; and Part Three, containing an outline for an intensive study on an occupation selected by the student.

One of the aims in preparing this work has been to make it thoroughly practical for secondary schools of the Southwest. Conditions existing in this region are such that other workbooks have failed to meet the needs of our section.

It is hoped that the material in this thesis will prove to be of practical value to others, and that the real aim of vocational guidance will be better realized.

ACKNOWLEDGMENTS

The sources from which I have drawn in the preparation of this thesis are numerous. For the greater part special acknowledgments cannot be made. However, I wish to express my gratitude to Professor A. B. Schmidt for his helpful criticisms and suggestions, and to my wife for her invaluable assistance in the preparation of this thesis.

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PART ONE

I. INTRODUCTION

Statement of the Problem

Until the beginning of the twentieth century the selection of an occupation was relatively simple. Seventy-five per cent of the young men followed the occupation of their fathers. Today not more than twenty-five per cent do that and this number is diminishing. The time has gone by when a boy's occupation could be decided for him by his parents. The farm or father's work usually required the older son's attention, while the younger boys perhaps had a chance to enter the professions. Today many of the occupations which provided a livelihood for our fathers and grandfathers do not exist, while we find countless new occupations opening up every day.

The situation today offers a challenge to the young person who would plan a successful and happy life. He must try to understand the present, to foresee the future, and to prepare himself both socially and economically for his place in society.

How he is going to do this is the problem that confronts all agencies of society today: government, industry, schools, and parents. Which one of these can best help him solve his

problem? Society leaves the task of guidance to the schools to a great extent.

This shifting of the responsibility to the schools has resulted in a wide-spread demand for more vital and definite courses in vocational guidance. The specific problem covered in this study appeared when the writer, as head of a high school social science department, attempted to formulate a course in guidance that would be suitable for his own community.

A survey of the available material, through writing to other high schools and reviewing numerous texts on the subject, revealed the absence of any thorough compilation of material to serve as the basis for such a course. Other high school teachers admitted the inferior character of their courses, in most cases rather haphazardly drawn up, designed to meet specific local conditions, and in no case suitable for conditions in Yuma County, Arizona. To meet this situation, the writer compiled and organized material suitable for a short vocational guidance course in Yuma County or any other non-manufacturing community in the Southwest.

The Need of Considering Economic Factors in Guidance

One of the basic objectives in vocational guidance is the direction of occupational choices in terms of aptitudes, abilities, and interests. Guidance officers attempt to assist students in that vocation or occupational field wherein the student's level of ability will make for success.

This method of matching the abilities of the student with those required in a particular occupation results in poor guidance for the individual.

For certain economic and industrial conditions may arise to complicate and block this matching procedure as an effective technique in guidance. For example, there are more jobs utilizing average or low ability than there are people with corresponding levels of mechanical ability. Conversely, there are more people with a superior level of this ability than there are jobs requiring such a level. On the basis of present day industry we find a decided discrepancy between the level of abilities available and those actually needed.¹

The matching of abilities of a student with the requirements of the job is further complicated by the inability of the public to pay for the services offered by those in that occupation.

The Committee on Cost of Medical Care cites an outstanding example of such a condition. At the present time there are 56 dentists per 100,000 population. This number cannot give adequate care. Indications are that 99 to 179 should be the number necessary to give proper dental care. But in terms of capacity to pay these 56 per 100,000 may represent overcrowding. It is suggested that this discrepancy between the supply and the estimated number required

1. Williamson, E. C. and Darley, J. G., "Matching Abilities to Jobs," The Personnel Journal, Vol. 13, April 1935.

cannot be adjusted until dental costs are reduced.¹

For very few occupations and professions are there reliable data regarding the number of needed workers to replace those superannuated, permanently disabled, or retired for other reasons.

Many guidance workers are satisfied to take the United States Census data as indicating the number of jobs available and the replacements needed. The Census data are valuable to show trends in occupations and the extent and types of workers employed, but they yield little information as to the kinds or number of workers needed by industry, business, and the professions.

Another problem confronting the guidance teacher is the fact that students counseled are at the beginning of a training period that will last from two to eight years. The counselor may have complete knowledge of present economic and industrial demands for workers in the various fields, but what assurance can he give that society will demand or reward the student's services after his long training period?

Some counselors do attempt a solution of the problem of these economic restrictions by enlightening students, stimulating basic research, and educating the public to an understanding of these problems. The purpose of these

1. Publications of the Committee on Cost of Medical Care, #22, University of Chicago Press, 1933. "Fundamentals of Good Medical Care," by Lee, R. I. and Jones, L. W., pp. 125-127.

workers is to bring about a solution by agitating until a public demand for planning employment needs, financial incomes, and occupational trends has been created.

The Scope of the Study

Realizing the impossibility of formulating a course that would be suitable for all localities, only general consideration was given occupations and conditions outside of our local community.

The Method of Compiling This Syllabus and Workbook

In preparing this syllabus the first step was a canvass of occupational interests of the junior and senior classes in Yuma school. The next step was to rank the occupations in that community in relation to their importance. Information for this was received from the County Assessor, Yuma County Water Users' Association, and the Chamber of Commerce.

The construction of a syllabus and workbook was the next step. The syllabus information was collected by interviews, references, and correspondence. Effort was made to take into consideration the biased opinions of the people interviewed and to present a true picture of each occupation.

The workbook is the result of three years experimentation with different types of problems and questions. The workbook has proven to be quite satisfactory in the Yuma High School.

II. REVIEW OF SOME PLANS FOR VOCATIONAL GUIDANCE FOR HIGH SCHOOLS

In the United States, not including Arizona

The following schools were selected because they give typical examples of guidance work carried on in different sections of the United States.

A. Seattle, Washington

The plan of guidance starts in the Junior High School. Pupils are given tests to show their aptitudes, their likes and dislikes and their mental ability.

Each student has a small folder with all his records, his grades, his achievements and any remarks of interest that pertain to him. (This record stays in the office of the school.) When he graduates from Junior High School this folder is sent on up to the Senior High School. The counselors study this chart and suggest courses and vocations. The student is allowed to try out in certain types of work, such as art, shopwork, agriculture, clerical work, etc.

The student then visits the various industries of his interest and secures interviews which he, in turn, reports to the class. Finally each student prepares

a careers book. In this the occupation that interests him most is studied.

B. Dallas, Texas

The public school system of Dallas has prepared and publishes its own workbook, entitled "Students' Workbook in Vocations".

This workbook contains eighty-five pages, enclosed in a heavy cover. The outline is given for the book and the pupils fill in the material found in their research.

The book has been prepared for local needs and includes only vocations of importance to Dallas.

The workbook includes twenty-three references for the use of teachers and 119 references for the students.

Reports from the schools show that interest has increased to the point where the course, "Occupations," has gained a prominent place in the high school curriculum.¹

C. Benjamin Franklin High School, South Norwalk, Conn.

Pupils in the three years of the junior high school meet two periods per week for study of occupations with teachers devoting part time to guidance. A general progressive series of steps are followed from one grade to the next. This keeps the subject alive

1. "Student's Workbook in Vocations," Social Science 2, Dallas Public Schools, Dallas, Texas, 1933.

and present in the students' minds. In addition to text study, visits are made to various shops and interviews are arranged with prominent professional men.¹

D. Brawley, California

An Occupations course is given in the Freshman year. The course is given by a social science teacher. It is only a one semester course. Materials used are a textbook, interviews, and visits to interesting industries in the community.

E. General Summary

1. Instruction in occupational information is rapidly being included in the regular curricula of the schools.
2. In the research made by the Department of Education on occupations, 1,111 schools were included. Of this number, 68.5 per cent reported having occupational instruction courses.
3. Instruction in occupational information given as a part of any other course is most often included in some social science subject.
4. There is a tendency to broaden the work done in occupational courses beyond one textbook or a single method of study.

1. Preffitt, Maris M., "Courses in Occupational Information," Bulletin, 1934, No. 11, U. S. Dept. of the Interior, Office of Education.

2. Ibid., p. 29.

5. There is a growing development of new techniques for the procedure of discovering an occupational interest.
6. The middle western states have a higher percentage of students enrolled in occupational courses than any other group of states.

In Arizona

A. Flagstaff High School

A course in occupations is offered for one semester and is taught by the vocational or shop teacher. The course is usually taken by Freshmen and lasts for one semester only. It is required of those graduating with the vocational diploma. The 1935 first semester enrollment was twenty-six.

B. Tucson Senior High School

In Tucson High School there is no course of guidance given. What guidance work carried on is done in the home rooms.

C. Tucson Junior High Schools

The Junior High School gives a course in vocations in the ninth grade. This course is required of all students. The boys and girls are in separate classes and each studies occupations that they might choose as a life's career.

The course lasts for a full year. The girls study pamphlets and outside material and later are tested to

try and help them find a vocation for which they are fitted.

The boys use a text for part of the year and the rest of the year a series of occupational tests are given them along with the study of outside vocational material.

D. Mesa High School¹

The plan of guidance in Mesa High School has been worked out in a very detailed plan. The training is put into operation through a plan of home rooms. These home rooms are organized on a class basis, boys and girls in separate classes. Each home room teacher of a freshman, sophomore, junior and senior group of about twenty-five pupils, has a mimeographed outline to be used for that class.

The topics for discussion are separated and instructions for presenting the material are included for the home room teacher in many cases. The work is carried on by reports, interviews, and general discussion.

The freshman year is devoted to learning about the school, desirable habits, and social courtesy.

The sophomore year study is made up of sportsmanship, personal appearance, world friendship, service,

1. Guidance Workbook Series, Mesa Union High School, Mesa, Arizona, 1935.

and social hygiene and health.

The junior year continues with the study of desirable ideals for good citizens. A few of the subjects included are honesty, courage, obedience, loyalty, kindness, friendliness, reliability and judgment.

The latter part of the junior work takes up a series of questions in regard to driving laws, table manners, and social courtesy.

In the senior year the problem of vocational guidance is introduced and the need for vocational guidance is discussed. The kinds of work one might enter, the advantages and disadvantages of each, and the ways of securing and making good at a job are covered.

The last part of the senior year is devoted to questions of marriage and the establishment of homes, and the problems arising within a family.

E. Phoenix High School

Phoenix High School gives an occupations course for freshmen. It is given as a one semester course; the boys and girls are divided into separate classes. It is not required and during the fall of 1935 the enrollment was forty-eight boys and twenty-five girls, a very small enrollment for a school with a total enrollment of 4,400 pupils.

The occupations studied are those that interest that particular group. Some effort is made toward the guidance of the individual into work for which he is best qualified to prepare.

F. Other Schools Giving Occupational Courses

The total enrollment of schools, and their enrollment in vocational guidance courses during the first semester of 1935 were as follows:

School	School Enrollment	Vocational Guidance Enrollment
Ashfork	17	10
Benson	104	12
Bisbee	464	19
Buckeye	173	22
Holbrook	151	32
Miami	375	50
Patagonia	69	20
Parker	40	8

G. All school authorities that were contacted believed that there should be more work carried on in this field. Reasons for not having better courses were attributed to lack of material on the subject, no demand for the course and no teachers in their systems qualified or interested enough to give the course. Lack of finances to establish and maintain such a course was one of the foremost reasons given.

III. CONCLUSIONS

1. Guidance with any degree of accuracy is a field that has only barely opened up.
2. There is need of selecting and training teachers to be qualified and capable counselors.
3. The information available for counselors is limited. There are some books, magazines, studies, and pamphlets available, but as a whole they are written on a very general basis. To get facts pertinent to a particular teacher's locality, it is necessary for him to go out and collect them for himself.
4. The sources from which one collects his information have to be weighed and evaluated. A dean of a certain school stated that there were places for every person graduating from that school. According to various published articles and men in the field engaged in this type of work, the profession was overcrowded and many of their number were forced into other lines to find employment.
5. Someone in each community should make a study of its occupations and gather information as to the possibility of employment in each.
6. The most reliable and complete material found was a series of guidance pamphlets published by the United States Department of Education.

7. There is a growing interest on the part of school authorities in occupational courses. Many lack material and funds to include such courses in their curricula at the present time.
8. There is a growing tendency to include the study of non-professional occupations as well as professional vocations.
9. The results from the courses now given cannot be checked with any degree of accuracy.
10. The use of a workbook has awakened many students to the requirements demanded by certain colleges, and to the qualifications necessary to fill certain occupational positions.

PART TWO
THE SYLLABUS

A. Purpose

The purpose of the syllabus is to give the teacher who has guidance work on his program a general plan to use when collecting occupational information.

The outline used for collection of information in the syllabus is necessarily more complete than that used in the workbook. The teacher must have a more complete outline to be able to check the reliability of the student's work.

As it is impossible to investigate and report any great number of occupations, only one or two were selected from each of the divisions of occupations made by the Census Bureau. Some of the occupations reported on here were ones that the students selected as the most desirable for a life's vocation. Others were selected because of their importance in the particular community.

B. General Outline Used to Collect Data

- I. Classes of ----- and nature of their work
- II. Working Conditions Surrounding Those Engaged in This Occupation
 - A. Health and Accident
 - B. Associates

C. Chances for advancement

D. Season and hours of work

III. Preparation

A. General educational requirements

1. General

2. High school subjects of particular value

B. Regulations and technical requirements

1. State laws

2. Labor Union regulations

3. Colleges or Universities outstanding in this field

4. Type of work necessary for preparation

a. Age

b. Education

c. Experience

C. Common deficiencies of present workers

1. Causes of removal

IV. Compensations

A. Salaries of various grades

B. Pensions

C. Industrial compensation

D. Average income of those engaged in this kind of work

V. Individual or special requirements

A. Mental

B. Physical

VI. Types of tests that should help to determine if a student is qualified for this work

A. Intelligence

B. Teachers' reports

C. Aptitude tests

D. Other special tests

VII. Means of getting a position

VIII. Supply and demand

A. Arizona

1. Number in the occupation

2. Number training for the work

3. Number unemployed

4. Number of positions in this occupation

B. United States

1. Number in the occupation

2. Number training for the work

3. Number unemployed

4. Number of positions in this occupation

IX. Prospects of ----- as a vocation

C. Selected Occupations Peculiar to Arizona

AGRICULTURE

GENERAL FARMING

I. Classes of Farmers and Nature of their Work

A. Cotton farming

1. Requires constant care, cultivation, chopping, irrigation, picking, etc.
2. Grower must go long periods of time without an income.
3. Must fertilize the land at least every four years to keep the soil built up.
4. Cannot make any use of his crop except to market it.

B. Truck farming (includes the raising of lettuce, carrots, cantaloupes, watermelons, cabbages, peas, tomatoes, etc.)

1. Requires a great amount of labor per acre.
2. Impossible for farmer to do all his own work. Necessary to hire lots of outside labor.
3. Labor trouble often develops in the sheds and fields.
4. Need of much special equipment.
5. Must depend on the immediate market. Impossible to hold this crop to wait for a better market.

6. Depletes the soil. Must continually rebuild it.

C. Alfalfa growers

1. Many crops coming in during the year gives a steady income.
2. This crop builds up the soil.
3. Hay and seed can be stored and held for a better market.
4. Alfalfa seed can be raised, but poor yields in Yuma make it a poor crop for revenue.
5. Alfalfa serves as good pasture for cattle known as "feeders". (Stock from the range brought in to fatten before they are sent over to the coast markets.)

D. Other classes of farming in Yuma

1. Dairying is carried on only to the extent of serving local needs.
2. Cereal crops (wheat, corn, oats, barley, etc.) are not very important. Some are raised on new land.
3. Small amounts of broomcorn are raised in the Gila Valley.

II. Working Conditions Surrounding Those Engaged in This Work

A. Health and Accident

1. Fresh air and exercise as a rule make for a healthy environment.

2. Working with stock and machinery often causes accidents.

3. Farmers and farm laborers rank the highest in longevity of all occupations in the United States, with a rating of normal expectancy of 58.5 years.¹

B. Associates

1. Most of those doing day labor do not rate very high mentally and have a poor education.

C. Chances for Advancement

1. Most boys will get their apprenticeship at home on the farm.²

2. The average young fellow will work as a day laborer. If he is industrious and alert he may be able to work up to foreman.³

D. Seasons and Hours of Work

1. Farm work is noted for long hours. One who is a clock-watcher should not think of becoming a farmer.

2. During harvest and irrigation time the longest hours are required.

3. Between crops a farmer does have the advantage of being able to take a week or so off at a

1. U. S. Department of Labor, Bulletin No. 207, Series 11.

2. Igee, Wm. D., "Possibilities of Agriculture as a Vocation," Careers and Hobbies, Dec. 1935, p. 3.

3. Ibid., p. 4.

time and do other things.

4. A farmer is his own boss if he owns his farm.

Farming is one of the few occupations of importance today in which a person may own his business and be his own boss.

5. Farming is the only occupation many could ever be happy in. Those people who like to see things grow and enjoy digging in soil with their hands should become farmers.¹

III. Preparation

A. General Educational Requirements

1. General

a. To be a day laborer very little education is required but the supposition is that few will want to stay in this group.

b. A general vocational training is needed to be a good farmer. He must be able to understand literature published concerning crops and land. He must be able to do general business mathematics.

c. The present day farmers include many agricultural college graduates. They are trained to work their farms scientifically and as a result in many cases they get much

1. Igoe, op. cit., p. 4.

better results than the average farmer.

d. High school subjects of particular value.

- 1) English
- 2) Business Arithmetic
- 3) Agricultural studies
- 4) Bookkeeping
- 5) Business law
- 6) Shop work
- 7) Economics
- 8) General science

B. Colleges and Universities Outstanding in this Field
in the Southwest

1. University of Arizona; Tucson, Arizona
2. Agricultural College, University of California;
Davis, California
3. Oregon State College; Corvallis, Oregon
4. University of New Mexico; Albuquerque, N. M.
5. Utah Agricultural College; Provo, Utah
6. New Mexico College of Agriculture and Mechanical
Arts; State College, N. M.

C. Common Deficiencies of Present Workers

1. Failure to adopt new methods and ways.
2. Failure to rotate crops when soil becomes
depleted.
3. Laziness, lack of attention to their farms.
4. Over-expansion, causing indebtedness that they

are not able to overcome.

5. Dissatisfaction with low prices paid for crops, resulting in many leaving farming for other occupations.

D. General Knowledge that a Farmer Must Have.

1. He must be an all-around mechanic, blacksmith, and repair man to keep his tools and equipment in good order.
2. He must be able to take care of stock, chickens, etc., around the farm, and have a general knowledge of their ailments and troubles.
3. He must understand crops, soil, cultivation, and the harvesting methods required for each crop.
4. He must be a shrewd buyer and seller to handle his business and come out on top. The better forecaster he is the more successful a farmer he will be.

IV. Compensations

A. Laborers

1. The day laborer receives about \$2.00 to \$2.50 per day for nine hours work.
2. Tractor drivers receive \$5.00 to \$7.00 per day.
3. Field workers in lettuce and other trucking crops receive thirty to forty cents per hour.
4. Cotton pickers receive from fifty to seventy-five cents per hundred pounds.

B. The farmer's income varies with the yield, the prices he receives for his crops, taxes he pays, and cost of his supplies.

1. Truck farmers receive as high as \$70 per acre profit at times when they have a good crop. Other times large fields ripen and not a crate is hauled out of the field because of low prices.

2. The records for Yuma Valley are as follows:¹

Year	Value of Crop	Average Value per Acre Cropped
1931	1,363,639	\$27.47
1932	1,230,836	28.49
1933	1,336,016	28.74
1934	2,508,836	53.96
1935	2,473,561	49.52

3. Some farmers raise part of their own food, thus cutting down their expenses. Many could not continue to farm if they did not do this to supplement their income.

V. Individual or Special Requirements

A. Mental

1. He needs to be alert, progressive, industrious, and resourceful.

B. Physical

1. United States Bureau of Reclamation, Annual Project History Yuma Project-Arizona-California, Calendar Year 1935, p. 46.

1. He must have good health and a strong body.
2. He must have a world of reserve strength and power to carry on under adverse conditions.

VI. Types of Tests that Should Help Determine if a Student is Qualified for this Work

- A. Intelligence tests can show if he has average intellectual ability.
- B. The best test is a boy's interest and willingness to do hard work.

VII. Means of Becoming a Farmer

- A. Most farmers are farmer's sons and they receive their start while at home.
- B. Many take over their father's farm after completion of school; others are helped by their parents in getting started.
- C. Others work for day wages and save enough to get some equipment, then they rent a place on "shares".
- D. The next step is buying a farm, usually on time, and from then on it is a long grind to pay off the mortgage.

VIII. Supply and Demand

A. Arizona

1. Total gainfully employed in farming in Arizona is 38,697, of which 18,497 are listed as farmers and 20,502 are listed as farm laborers.¹

1. United States Department of Commerce, 15th Census Report, 1930, Vol. I, 'Unemployment,' p. 115.

2. 1,314 farm laborers and 91 farmers are listed as out of employment.¹
3. 23.4 per cent of Arizona population live on farms.²
4. The distribution of farmers in Arizona according to age is as follows, according to the 1930 Census: under 25, 359; 25-34, 1,941; 35-44, 3,346; 45-54, 3,289; 54-64, 2,289; over 65, 1,329.
5. In 1931-32 out of approximately 7,400 boys in high schools in Arizona only about 600 were enrolled in 49 agricultural classes over the state.³

B. United States

1. The 1930 census lists 6,288,648 farm operators operating on 968,771,016 acres. Each farm averaged about 157 acres per farm.
 - a. The distribution according to age is as follows: under 25, 371,695; 25-34, 1,049,052; 35-44, 1,425,425; 45-54, 1,459,959; 55-64, 1,094,003; over 65, 676,374.
2. Generally about 75 per cent of the boys who live on farms remain and follow the occupation of their fathers.⁴

1. 1930 Census, Vol. I, "Unemployment," p. 115.
2. Fuller, John Seymour, Some Criteria for Establishing and Maintaining Departments in the Secondary Schools of Arizona, p. 29.
3. Ibid., p. 38.
4. Ibid., p. 40.

IX. Prospects of Farming as a Vocation

- A. Agricultural vocations are not diminishing in importance, but they are changing in character. The old time farmer is passing out of the picture and his place is being filled by progressive business men who take an intelligent interest in social and political problems. There is room for intelligent, resourceful men with a good deal of business ability in farming today.¹
- B. Small farming will rapidly disappear during the next twenty years. The advantage is rapidly shifting to the farm operated on large scale methods. Even with large scale farming, certain types such as dairying, grain farming, and cotton farming are pitfalls. It is best for the average young farmer to keep out of them. Many years must pass before prosperity will return to this type of farming.²
- C. The way to farm ownership is hard, but a young man with ambition who desires independence and personal security can do no better today than to work toward this goal.³
- D. President Roosevelt stated in 1935 that "the future of the United States is with the farmer".

1. Proctor, Wm. M., Vocations, Ch. VI, pp. 51-55.

2. Pitkin, Walter, New Careers for Youth, p. 100.

3. Careers and Hobbies, "Possibilities of Agriculture as a Vocation," p. 3.

- E. With the change to trucking in Yuma, together with the fact that many winter crops can be grown there, Yuma should make great progress as a farming community.
- F. In addition, the Gila Project, which is now in construction, will open up some 200,000 acres to farming in this locality.
- G. As a warning, do not plan to be a farmer unless you like outdoor work, lots of it, long hours and many hardships. If you do you will no doubt receive rewards that will more than compensate you for your efforts.

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HORTICULTURE

I. Citrus and Pecan Growing

A. Citrus Growing

1. This crop may be classed in the luxury group.
In a period of hard times the demand and price will probably fall. This is not a very desirable situation from the grower's viewpoint.
2. The original outlay cost per acre until the time a return may be expected from the crop is about \$600.00.
3. Grapefruit is a seasonal crop. First shipments are made about the end of November and extend until the middle of May.
4. Constant care, cultivation, irrigation, fertilizing and general upkeep make growing citrus a year around job.
5. Most of the Yuma orchards are operated by syndicates. In charge of each syndicate's holding is usually found a college graduate of some recognized agricultural school. There are some orchards that are operated by private owners and do not have specially trained men to manage them.
6. Supply and Demand
 - a. United States

- 1) The consumption of grapefruit per capita in the United States twenty-five years ago was less than one fruit. Ten years ago the amount had risen to six per capita. At the present time the consumption is about eight.¹
- 2) The production of grapefruit in the United States has doubled in the last ten years. During 1934-1935 season, over 18,000,000 boxes of grapefruit and 58,000,000 boxes of oranges were marketed.²
- 3) The need of increasing national consumption is one of the main objectives of the California Fruit Growers' Exchange, an organization extending over Southern California and Arizona. Over 60 per cent of all citrus fruits from these two states are marketed under this organization. "Sunkist" is the trade name of their first grade product.³

b. Arizona

- 1) The first citrus was planted in Arizona in 1889. At the present time there are

1. Bemis, M. E., "Some Citrus Facts," Arizona Producer, Vol. 14, June 15, 1935, p. 8.

2. Ibid.

3. "Two Citrus Co-ops," Arizona Producer, Vol. 14, Nov. 1, 1935, p. 2.

over 15,000 acres of grapefruit and about 7,300 acres of oranges, of which 2,400 are valencias, 3,900 are navels and 1,000 are seedlings.

2) In Yuma for 1934-35 there was 1,070 acres producing and about double that amount less than four years old. The production for 1934-35 was 246,000 packed boxes. This was marketed through the Yuma Mesa Fruit Growers' Association, a branch of the California Fruit Growers' Association.¹

3) As a career in this occupation it would seem that the need of capital and experience make it rather a closed occupation for the average boy.

4) Growers claim there is small profit in the citrus industry. Too many regions are producing in competition with Arizona now.

B. Pecan Culture

1. The pecan requires from 7-10 years after planting before it will yield a paying crop. This requires the reserves of considerable cash

1. Annual Project History, Yuma Project, Arizona-California, U. S. Bur. of Reclamation, Calendar Year 1935.

before one should attempt to plant pecans.

- a. Farmers often offset this advantage by growing truck crops between the growing trees until they are of bearing size.
2. The pecan requires constant care during this growing period, pruning, irrigating, and cultivating.
3. The original outlay for good trees is about \$1.00 per tree.
4. A pecan crop is not a sure crop. Some years a very small amount "sets"; other years the nut "sprouts," spoiling it for the market.
5. The price of pecans has gone down over one-half in the last five years. With the increased acreages in Arizona and Texas it is probable that the price will drop more.
6. Supply and Demand
 - a. The price of good paper shell pecans has dropped from \$1.00 per pound to about 25 cents per pound in the last ten years. The demand has not decreased, but the supply has gone ahead by acres and acres.
 - b. There is a question whether or not the pecan produced in Texas where they do not have water and construction charges to pay will prevent the Yuma pecan growers from being

able to compete.

- c. The 1935 pecan crop in Yuma was 229,316 pounds from 1,806 acres. This gives an average of about 127 pounds per acre. Of this acreage, most of the trees have not reached full production yet. In 1935 there were 1,036 acres of pecans that had not reached bearing age.¹
- d. Fruit growing is a good occupation for the right person. It is not only an occupation or vocation, but it is a business where one is the workman, general manager, and owner. Fruit growing holds prospects because fruit acreage reductions have been as great as thirty per cent, except in Maine in the east and Washington in the west. Prices, while not high, have been high enough to give the fruit grower operating on a business basis a profit.²
- e. The numerous uncertainties of this occupation make it highly desirable for the person who is thinking of becoming a fruit raiser to investigate all phases of it before investing

1. Annual Project History, Yuma Project, op. cit.

2. Shaulis, C. F., "Fruit Growing," Careers and Hobbies, Dec. 1935, p. 5.

all or even part of his capital in a
fruit ranch.¹

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FORESTRY

FOREST SERVICE

I. Foresters and Nature of Their Work¹

A. The National Forests are federal forest properties administered by the United States Department of Agriculture, and directly in charge of the United States Forest Service, a bureau of that department. The Forest Service has supervision over 166 National Forests, comprising over 160,000,000 acres. In Arizona there are nine National Forests covering an area of approximately 12,000,000 acres. The work of the Forest Service is divided into two branches: forestry and range supervision.

1. Forestry Division²

a. Forest Rangers are the field men.

1) They are responsible, under the direction of the Forest Supervisors, for the protection and management of range districts consisting of from 50,000 to 300,000 acres.

2) The primary duty of the Forest Rangers is to protect their districts against forest fire. Protection against fires requires

1. Information regarding employment on the National Forest.
Misc. O.170, United States Department of Agriculture.

2. Ibid.

good planning, an efficient organization, and often long, strenuous hours of riding and hard manual labor.

- 3) He must handle the field work in connection with the sale of timber and many other activities of a similar nature.
- 4) He is expected to build trails, cabins, or fences when his time is not actually needed on administrative work.

b. Junior Forester¹

- 1) A limited number of Junior Foresters are assigned to Forest Experiment Stations, forest products research, to the care of timber surveys, or to fill other specialized positions.
- 2) Qualifications are higher for this work than for ranger work.

c. Forest Supervisor

- 1) A Supervisor has control of a National Forest which is comprised of 5 to 8 ranger districts.
- 2) He is in direct charge of and solely responsible for the efficient business management of his forest.
- 3) He is responsible for sound technical

handling of all of its resources.

- 4) He must have the capacity for successful leadership of men.

2. Range Management¹

a. Junior Range Examiner, Assistant Range Examiner, and Range Examiner

- 1) He must have technical training to fill this position.
 - a) Graduate from a college giving these courses or
 - b) Have had at least four years of experience in practical range problems.

2) Duties

- a) Range Examiner's duties consist of supervising the grazing of livestock upon National Forests, allotting grazing privilege, and dividing the ranges between different cattlemen and sheepmen.
- b) They are charged with the work of improving depleted grazing areas and cooperating with State and Federal authorities in the enforcement of livestock quarantine regulations.

II. Working Conditions Surrounding Those Engaged in This Work

I. Information Regarding Employment on the National Forest
Misc. O.170, United States Department of Agriculture.

A. Health and Accident

1. Ideal conditions for healthful living are one of the Ranger's rewards. He lives outside, many nights are spent out in the open. A person that cannot get along without the conveniences of civilization should not enter the Forest Service.
2. There is no place in the ranger service for a person with poor health.
3. A Forest Ranger is often forced to place his life in jeopardy in carrying out his work. Fire fighting, rescue of lost and stranded persons during storms and blizzards are part of his duties.

B. Associates

1. This work will require a man to find part of his company in his work.
2. His co-workers will be of a higher level, but he will have to deal with the people of his districts and part of his success depends upon how well he can adapt himself to conditions which he will find there.

C. Chances for Advancement¹

1. Promotions in the Forest Service are made from the Service. At the present time there is no uniform system of promotion.

1. United States Department of Agriculture, Forest Service, "Personnel Program for the Forest Service."

2. Usually a ranger's chance for advancement depends upon his length of service and ability to fill the position.
3. Promotions many times are very slow, causing some to become discouraged.

D. Hours and Time of Work

1. The Forest Service is not a place for a person who is afraid to work, or one who is a clock-watcher.
2. The Ranger is his own boss, but he has certain work which must necessarily be completed within a certain time.
3. Certain seasons when the forest is very dry require additional help, and a great amount of extra work for the Ranger.

III. Preparation

A. General Educational Requirements

1. Courses in High School that will help prepare one for this work.
 - a. Biology
 - b. Chemistry
 - c. Zoology
 - d. Agronomy
 - e. Botany
 - f. Animal Husbandry

g. Geometry and Trigonometry

h. English

i. Economics

2. For a Forest Ranger position it is almost essential that the applicant have a degree from a college of Forestry.

B. Technical Requirements which the United States Civil Service Commission lists for Junior Foresters.¹

1. They must be citizens of the United States.

2. Education and Experience.

- a. They must show that they have graduated from a four-year course in a forestry school of recognized standing, or from the forestry department of a college or university of recognized standing, or from a recognized college or university with a bachelor's degree in a branch other than forestry, and, in addition, with a master's degree in forestry; or

- b. They must show that they have completed at least two full years of work in a college or university of recognized standing with major courses in science, and, in addition, have

1. United States Civil Service Examination Announcement for Junior Forester, April 15, 1935.

had at least two years of field experience in technical forestry; or

- c. any combination of the educational and experience described under (b) aggregating four years, except that, in any event, at least two years of college training described under (b) must be shown.

3. Age

- a. They must have reached their twenty-first birthday but not their thirty-fifth birthday on the date of the close of the receipt of application.

4. Physical Ability

- a. They must have such health and freedom from physical defects as will enable them to meet the physical standard which the Commission deems necessary to perform the duties of the position. Persons selected for appointment will be required to pass a physical examination given by a Federal medical officer. Failure to pass such physical examination will prevent appointment.

- 5. The Forest Service is not open to women, because of the type of work expected of those in the service.¹

1. U. S. Dept. of Agriculture, Forest Service, "Information Regarding Employment on the National Forest," Misc. O.170.

C. Schools or Colleges in the West That Give Courses in Forestry or Similar Subjects.

1. University of California, Berkeley, California
2. University of Idaho, Moscow, Idaho
3. University of Montana, Missoula, Montana
4. University of Washington, Seattle, Washington
5. Oregon State College, Corvallis, Oregon
6. University of Arizona, Tucson, Arizona

a. This university gives a very good course of study that will prepare one to enter the competitive examinations for Junior Range Examiner.

D. Common Causes of Failure in the Forest Service.

1. One of the most common causes of failure is the inability of the young ranger to adjust himself to the conditions with which he is confronted. Dislike of isolation out in the "sticks".
2. Inability to get along with the people in his district because of their standards which are quite different from those to which he is accustomed.
3. Poor planning and management of his district.

IV. Compensations

A. The Forest Service Schedule¹

1. U. S. Department of Agriculture, Forest Service, "Information Regarding Employment on the National Forest," Misc. O.170.

Forest Supervisor (\$2900-\$4400)	
Assistant Forest Supervisor (\$2300-\$3100)	
Logging Engineer (\$3200-\$6400)	Chief Lumberman (\$2600-\$3100)
Associate Forester (\$3200-\$3700)	Associate Range Examiner (\$3200-\$3700)
Assistant Forester (\$2600-\$3100)	Assistant Range Examiner (\$2600-3100)
Junior Forester (\$2000-\$2500)	Junior Range Examiner (\$2000-\$2500)
Forest Ranger (\$1620-\$2500)	Forest Clerk (\$1800-\$2500)
Field Assistant	Forest Guard

The last two groups are employed only in times when the regular men cannot do all the work. The pay for this type of work is by the hour or day; 50 cents per hour is the minimum.

B. Pensions¹

1. Each federal employee under civil service has three and one-half per cent of his pay deducted for retirement. This is used to create an annuity for the employee when he reaches retirement age: 60-65, depending upon the work in which he is engaged.
2. The Federal Government will pay as a retirement \$30 per year for each year of service not exceeding 30 years.
3. If the sum of the employee's annuity and the government contribution does not give a yearly pension equal to \$1200, the government will add

1. National Federation of Federal Employees, "Methods of Computing Annuities and other Essential Information in Regard to Retirement Act of May 29, 1930."

the difference to make the yearly income that amount.

4. Higher paid officers may receive a retirement income equal to three-fourths of their regular salary.

C. Health Insurance

1. After five years of service if an employee is unable to continue his work due to disease or injury not in the line of duty he will receive an income of \$30 per year for each year of service in addition to a return from his annuity.

D. Workmen's Compensation

1. If injured in line of duty he receives compensation equal to 66 $\frac{2}{3}$ % of his monthly pay, with \$116.66 set as the maximum and \$58.33 set as the minimum.
2. All medical and hospital expenses will be paid by the government.

E. Burial

1. The federal government will pay burial expenses up to \$200.

V. Individual or Special Requirements

A. Mental

1. Ability to do college work and then enter into competitive examination for a position.
2. Only the student that ranks well up in the class

should be encouraged to select forestry as a vocation.

B. Physical

1. Only those with a strong body and in good physical condition should enter this occupation.
2. Hardship and long hours of work are part of the regular day's job.

VI. Types of Tests that Should Help to Determine if the Student is Qualified for This Work

A. Intelligence

1. Should be given student to determine if he is capable of doing college work.

B. Teacher's Class Reports

1. Students can be classified by the classroom teacher in relation to the subjects he is interested in.

C. Interest Test

1. Used to determine interests for various fields.
2. Considerable work is being carried on in developing the usefulness of these tests.

VII. Methods of Securing a Position

A. Keep posted on examinations that are given by the Civil Service Commission.

B. A federal law requires that a citizen of the State in which a vacancy occurs shall have preference over anyone from outside of that State. So try

your own State. You will have a better chance!

C. Apply at lumber companies that are doing forestry work on their own holdings.

D. Many States have established forest service branches which carry on this type of work--in California, New York, Washington, etc.

E. Contact your regional office. For Arizona, it is located at Albuquerque, New Mexico.

VIII. Supply and Demand

A. Arizona

1. In Arizona, there are about 120 men employed in forestry and about the same number in range management, and other branches of the Service.
2. Special emergency work carried on by the C.C.C. and E.R.A. afford employment for many, as each project in the National Forest has a Junior Forester in charge of operations there.
3. In 1930 there were 865 gainfully employed workers in forestry in Arizona. 30 were out of work and unable to get work; 20 were doing part time work in forestry.¹

B. United States

1. All western college classes in forestry have shown a decided increase in enrollment in the last four years, approximately 3,000 in 1930.²

1. U. S. Census, 1930, "Unemployment," Vol. I.
2. National Lumberman, April 1934.

2. There are over 2300 C.C.C. camps in the United States at the present time.

3. According to the 1930 census, over 300,000 persons were employed in work producing forest products.

C. According to a supervisor of one of Arizona's National Forests, approximately 1050 were examined in April 1935 for Junior Forester. About 70% passed and were placed on the eligible list, most of whom have been employed in emergency work.

IX. Prospects of a Future in Forestry

A. Forestry is one of the vocations that we may safely classify as a hopeful field at the present time.¹

1. The people of the United States have only recently awakened to the fact that our forests were fast becoming a thing of the past. Today we find both federal and state governments engaged in many different activities of conservation of our forests and grazing lands.

2. The small number of unemployed in the United States is due to the tremendous amount of work that the Federal Government is carrying on in the forests. C.C.C. work and various other emergency projects require men with forestry

1. Pitkin, Walter B., New Careers for Youth, Book V, Simon and Schuster, New York, 1929.

training to do supervisory work. As stated before, each C.C.C. camp has at least one Junior Forester attached.

3. Besides forestry proper there are many other activities, such as research, soil erosion, tree surgery, etc., closely connected with it.
4. Another advantage of the Forest Service work is the fact that if you do your assigned work efficiently you are sure of having a job. The risk of unemployment due to industrial or political changes is eliminated to a large extent.
5. In addition to the National Forest Service, there are many lumber companies and large landed estates which employ foresters to conserve and protect their trees, advise in regard to cutting and conservation, and attend to matters of "tree surgery," or the problems dealing with tree pests of all kinds.¹
6. As to whether the future continues to be as bright as it is now, much depends upon the policy of our future administrations. But it is hard to believe that anything other than continued development will take place in this vocation.

1. Proctor, William Martin, Vocations, Houghton, Mifflin Co., Boston, 1929, p. 29.

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EXTRACTION OF MINERALS

MINING ENGINEER

I. Types of Mining Engineering and Nature of the Work

A. Mining engineers may be divided into three classes or groups: mining, metallurgical, and petroleum. These are the special lines that they prepare for in training, but besides these main fields they must have a general knowledge of engineering for they may be called on to build roads, construct water systems, all kinds of mine buildings, and besides carry on administrative work.

1. The Mining Engineer¹

- a. He must have a knowledge of minerals and be able to judge the merits of a prospect.
- b. He must be able to figure estimates as to grades of ore and costs of materials.
- c. He must have a general knowledge of all general engineering problems.
- d. He must know and successfully use methods of mining ores in the most economical manner.

2. The Metallurgical Engineer²

- a. Must have a deep liking for chemistry and

1. American Association of Engineers, Vocational Guidance in Engineering Lines, Mack Printing Co., Easton, Pa., 1933.
Butler, G. M., "Mining Engineering," Ch. VIII.

2. Ibid., Mathewson, Edward P., "Metallurgical Engineering," Ch. XLIII.

physics.

- b. Must possess the knack of handling men.
- c. Must know how to economically extract metal or metals from ores, as by smelting, reducing, refining, or alloying.

3. Petroleum Engineer¹

- a. The problems of the petroleum engineer involve mechanical and geological engineering, physics and chemistry.
- b. He must be able to work with men of low intelligence, for many oil workers are of this class.
- c. He must be able to organize a field so that the greatest recovery is possible.
- d. It will be necessary to have knowledge of oil and gas transmission and refining.

II. Working Conditions Surrounding Those Engaged in This Kind of Work.

A. Health and Accident

- 1. The mining industry is not a healthy industry. Smoke, gas, poison chemicals all tend to injure the miner's health.
- 2. Underground work is classed as a dangerous pursuit by insurance companies. Mining accidents

1. American Association of Engineers, *op. cit.*, Mathewson, Edward P., "Metallurgical Engineering," Ch. XLIV.

- are frequent, but rarely involve the engineer.
3. He is forced to live in camps where unhealthy living conditions prevail.

B. Associates

1. Mining operations are carried on in many cases where low moral standards prevail.
2. The majority of men under the engineer will be of a very low class of people.
3. He is forced to leave his family behind many times due to isolated work.

C. Chance for Advancement

1. There is no limit to the chances for advancement. Each engineer must prove his worth to hold his position.
2. If he is able he will find backing and some day may be his own boss.
3. A man must weigh his decisions, for often a most important decision will rest upon his word.

D. Season and Hours of Work

1. Mining is an occupation that feels the effects of an industrial depression at the very beginning of the decline.
2. Mining is also subject to booms; then, after a short time, the ore may play out, together with jobs. Strikes also are prevalent where large numbers are employed.

III. Preparation

A. General Educational Requirements

1. Must be a graduate of a recognized college or university giving a course in mining.
2. The mining engineer usually majors in geology for his undergraduate work, securing his A.B. degree in that department, but carries also considerable work in mechanical and electrical engineering courses. The degree of M.E. or Mining Engineer is not earned until one or two years of graduate study have been devoted to the special courses that relate to the technique of mining and metallurgy.
3. A course in Mining Engineering is generally recognized as one of the most difficult offered on any campus, as it usually is the most rigidly prescribed.
4. High school subjects that will be of particular value in preparation
 - a. Chemistry, physics
 - b. Economics, geography, civics
 - c. Algebra, geometry, trigonometry
 - d. Bookkeeping and accounting
 - e. Mechanical drawing
 - f. English

B. Regulations and Technical Requirements

1. Special courses required in college

- a. Good working knowledge of higher mathematics
 - b. Physics
 - c. Strength of materials
 - d. Hydraulics, thermodynamics
 - e. Surveying
 - f. Ore dressing
 - g. Mineralogy, geology, petrology
 - h. First aid work
 - i. Assaying
 - j. Metallurgy
2. Some colleges of the west with mining schools of good standing
- a. University of Arizona, Tucson, Ariz.
 - b. Colorado School of Mines, Golden, Colo.
 - c. University of Washington, Seattle, Wash.
 - d. Stanford University, Stanford, Calif.
 - e. Montana State School of Mines, Butte, Montana
3. Common Deficiencies of Present Engineers
- a. Many cannot keep a high moral standard.
 - b. They are often influenced when large sums of money are involved. Once they give false advice their hope of success in the future is gone.
 - c. Many are not properly trained, having only practical experience and lacking technical training.

IV. Engineering Compensation

A. Mining Engineers are, in comparison with other engineers, well paid men.

1. The young engineer, after leaving college, will probably have to start in as a rodman, transitman, or draftsman and will receive from \$85.00 to \$100.00 per month.
2. In normal times few capable mining engineer graduates of recognized colleges will have to accept less than \$125.00 per month on their first jobs.¹
3. Unless a salary of \$250.00 to \$300.00 per month is received within five years after graduation, there is reason to believe the mining engineer hasn't taken full advantage of his opportunities, or is not showing the proper attitude toward the work.²
4. Heads of engineering or geological staffs and the superintendents of mines, mills, or smelters receive from \$3000 to \$5000 a year or more.³
5. Managers of very large operations may receive \$15,000 to \$20,000 per year.⁴

V. Individual or Special Requirements

A. Mental

1. American Association of Engineers, op. cit., Butler, G.M., "Mining Engineer," Ch. VII.

2. Ibid.

3. Ibid.

4. Ibid.

1. An aspirant to this profession should stand well above the average of the population at large, and should rank well above the average of high school students.¹
2. He must have an analytical, investigative turn of mind.
3. He must be resourceful and have a strong leaning toward mechanical and scientific subjects.
4. He must have a high moral standard.
5. The examining engineer who reports upon prospects of mines has a tremendous responsibility which cannot be shirked.

B. Physical

1. Must have good health, above the average.
2. Must be able to withstand hardships and lack of conveniences. The prospective mining engineer should possess the hardihood of the trail blazer or the pioneer.

VI. Types of Tests that Should Help to Determine Whether or Not a Student is Qualified for This Work

A. Self-analysis

1. Each student should try to analyze himself as to his qualifications and traits in relation to what will be expected of a mining engineer.

1. Kitson, H., I Find My Vocation, McGraw-Hill Book Co., New York, 1931, Ch. VI.

B. Intelligence Tests

1. Must have an intelligence rating which is in the upper one-half of his high school class.

C. Special Subject Examinations

1. By taking an examination in the subjects that underlie an engineering education: mathematics, physics, chemistry and the like, one can advise a young man on the selection of engineering for a vocation. He should not try to become an engineer unless he ranks well up in these subjects.¹

D. Mechanical Aptitude Tests

1. Mechanical aptitude is a trait that is required to be a successful engineer.
2. Kitson states that there are no tests at the present time that can be classed above "doubtful" as far as reliable results are concerned.
3. Most of these tests are little more than a type of intelligence test.²

VII. Means of Getting a Position

- A. Many large companies select a number of men each year who have their instructor's recommendation.
- B. Many young men go out into the field, get a job as a rodman or draftsman and then, after proving their worth, work up to a responsible position.

1. Kitson, *op. cit.*, p. 47.

2. *Ibid.*, p. 48.

- C. Placement bureaus of the mining schools are often able to place nearly all of their graduates.
- D. Summer work in the field will often give a young man contacts that may serve as an avenue of approach for a job after graduation.
- E. Professional associations often aid the young member to find a location.

VIII. Supply and Demand

A. Arizona

1. Dean Butler of the School of Mines, University of Arizona, stated that he could place all the graduates from the school of mines from the University of Arizona. The salary would range from \$125.00 to \$140.00.
2. In 1929 there were eight large copper mines operating in Arizona, employing 2,964 earning \$4,325,-430 and produced products valued at \$82,745,917.¹
3. Total gainfully employed in mining in 1930 were 17,566 and an additional 1,207 were working part time.²
4. The search for precious metals has increased the need for mining engineers in Arizona by twofold in the last five years.

B. United States

1. Arizona Year Book, 1930.

2. United States Census, 1930, "Unemployment," Vol. I.

1. The number of freshmen in American mining schools has increased from 1,105 in 1932-1933 to 1,583 in 1934-1935, a 44 per cent increase.¹
2. The total student body in mining schools has increased 22 per cent in 1934 over 1933.²
3. In regard to withdrawals in college it has been found that for each 100 students entering, 62 complete the first year, and only 42 finish the second year creditably. Only 37½ per cent that enter graduate.³

IX. Prospects of Mining Engineering as a Profession

- A. Dean Butler, University of Arizona, believes that mining engineering holds the greatest future of any of the engineering professions.
- B. Of all the professions that are over-crowded, mining engineering probably ranks first. The field is limited and opportunity is small.⁴
- C. Large mining companies will necessarily have to hire electrical and mechanical engineers, and if they are to continue in mining it seems reasonable that they will also continue to engage mining engineers. The search for minerals and metals will never cease. Manufacturing and industries of all

1. Plank, W. B., Report, "Registration in Mining and Metallurgical Schools," Meeting of A.I.M.E., Feb. 1935.
2. Ibid.
3. Ibid.
4. Pitkin, Walter, New Careers for Youth, Simon and Schuster, 1934, p. 102.

kinds will come and go, but like the brook, mines and mining must go on forever.¹

D. "In general, it may be said that for the most part mining engineering is an assembling of rather elementary operations of the other branches of engineering." With the growth of large mine owning corporations, which have been inclined to pool their engineering operations, the field for the mining engineer has tended greatly to decrease.²

E. There has been a steady improvement in the employment of the graduates of our mining schools for at least the past three years. Of those who graduated in 1932 at least fifty per cent obtained positions upon graduation or went to graduate schools. Of the class of 1933, eighty per cent were employed or in graduate schools about six months after graduation. The figures for the class of 1934 report that 86.4 per cent were employed or in graduate schools. For Canada the reports show that all of last years graduates are employed or in graduate schools.³

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MANUFACTURING AND MECHANICAL INDUSTRIES

PRINTER

I. Classes of Printers and Nature of their Work

A. Printers may be divided into at least six classes: compositor, pressman, linotype operator, monotype keyboard operator, or monotype caster-operator. Each has some part in the reproduction of reading matter by means of the printing press.

1. Compositor

- a. Must be able to set type rapidly and accurately.
- b. Must be able to check and count errors in type before going to press.
- c. Should know of the various kinds of type used and their different uses.
- d. Must know about classes of paper and kinds of inks.

2. Pressman.

- a. Must have knowledge of type setting.
- b. Must be able to keep presses in good mechanical condition.
- c. Must be fast and efficient with press.

3. Linotype Operator, Monotype Keyboard Operator, Monotype Caster Operator.

- a. Must have good knowledge of English grammar.

b. Must be accurate. Mistakes in this work require a great amount of work to correct.

c. Must be able to take care of his machine, oil, repair and adjust as needed.

II. Working Conditions Surrounding Those Engaged in This Kind of Work

A. Health and Accidents

1. Working conditions not too good. Many print shops do not have proper ventilation or good lighting and often are not kept as clean as might be.

Danger of eye strain and nervous tension due to confining work.

2. Accidents are relatively few in this vocation.

3. Illness peculiar to the trade. The printing trades rank fourth as the most dangerous from lead poisoning. 237 printers out of 1000 die of tuberculosis.

B. Associates

1. The lower grades rank as semi-skilled and skilled workers.

2. A young person will find many older men in the shops. They have learned the trade from experience.

3. As one goes higher in his work to become foreman or owner, he correspondingly attains a higher social standing.

C. Chances for Advancement

1. At the present time very few promotions are given. But the one that can make himself better than his fellow-workers will manage to get ahead.
2. A worker can advance to foreman of the shop or, if progressive, can some day own a shop of his own. In the case of the newspaper he may work toward becoming the editor or owner.

D. Season and Hours of Work

1. Printing is a very stable industry. The work is not classified as seasonal.
2. The present Union regulations call for a 40 hour week.

III. Preparation

A. General Educational Requirements

1. The boy going into this industry must have at least a high school education to be accepted. Of course some are employed to do ordinary laborer's work, but they cannot hope to advance to a much higher position, and they do not need a high school education.
2. Courses in school that will help one in preparing for this work
 - a. English grammar, composition, and journalism
 - b. Economics and civics
 - c. Penmanship and spelling
 - d. Typewriting and printshop work

B. Regulations and Technical Requirements

1. State Laws

- a. There are no special state laws in Arizona regulating the printer.

2. Labor Union (The International Typographical Union)

a. Regulations

- 1) Must be 16 years of age
- 2) Must have a high school education to become an apprentice.
- 3) Requires five years of apprenticeship.
- 4) Removal because of
 - a) Incompetency
 - b) Insubordination
 - c) Drunkenness
- 5) Union Dues Required
 - a) About \$6.70 per month, divided as follows: to the International, \$4.68; to Central Trades Council 20¢; to State Federation of Labor 15¢; and for the upkeep of the local union \$1.67.

C. Common Deficiencies of Present Workers

1. Lack of education. Many cannot advance or receive better pay because they lack the fundamentals of English grammar which are needed in the correction and reconstruction of copy.

IV. Remuneration

A. Union

1. Apprentice's salary set by foreman usually \$12 to \$15 per week, the first year. The third year he receives one-half of a Journeyman's wages, the fourth year five-eighths, and on the present scale the fifth year he will receive \$44.00 per week for a 40 hour week.
2. Other remuneration under the Union
 - a. Old age pension
 - b. Printers' home in Colorado Springs
 - c. \$500 for burial expenses for each member in good standing at time of death.

B. Non-union Shops

1. Salaries vary, usually not as high as union shops and are allowed to become a printer in a shorter period of preparation.

C. Average income of all engaged in that work

1. The average for all wage earners in the printing trades in 1923 was approximately \$1625 per year, and for foremen, proof readers, editors, managers, etc., it was \$2200 per year.¹

V. Individual or Special Requirements

A. Mental

1. Must be mentally alert.

1. Prester, W. M., Vocations, Houghton Mifflin Co., Boston, 1929, pp. 147-157.

2. Must have a normal intelligence level.
3. Must show carefulness in his work.
4. Must have sense of balance and proportion for laying out work.

B. Physical

1. Should have good eyesight.
2. Should have manipulative skill or ability.

VI. Types of Tests That Should Help to Determine if a Student is Qualified for This Work.¹

A. General intelligence tests

1. The present belief is that each occupation requires a certain intelligence level for one to be successful.

B. Teachers' tests in classwork

1. Teachers' reports of classwork and attitude are very helpful.

C. Aptitude tests

1. These are to test if the person has the capacity for developing skill and ability needed in this vocation.

VI. Means of Getting a Position

A. Union

1. Apply at Union office. Secure information through the local secretary.

1. Jones, Arthur J., Principles of Guidance, McGraw-Hill Book Co., New York, 1930, Ch. 9.

B. Other Means

1. Work in print shops as a helper till an opening comes for an apprenticeship.

VIII. Supply and Demand

- A. Arizona has 918 classified printers, of which 165 are women. Of this same number Arizona has some 46 persons who are out of work and who are able and looking for work. In addition to this there were 21 who were doing part time work and couldn't get regular full time work.¹

B. Unions

1. Membership in Arizona is approximately 400; Phoenix 120, Tucson 65, of which the Union secretary estimates 80% are employed at the present time.

- C. In the United States we have 2,300 daily papers, 12,000 weekly papers, and some 20,450 job and other printing establishments which employ 291,059 people classified as printers.

IX. Prospects of Printing as a Trade

- A. At the present time we find this occupation overflowing, as are most all other occupations.
 1. If a young, intelligent, alert boy or girl wants to go in and work for a number of years, he will be able to learn the trade and be in a position

1. U. S. Census, 1930, "Unemployment," Vol. I, p. 115.

to advance into a better position when conditions improve.

2. He should realize before he enters this field that it is a long way to the top and that many firms will go broke and he may be one of many to lose his job.

3. Walter B. Pitkin in his New Careers for Youth, 1934, lists job printing as one of the safe bets for the small independent. He states that

"certain kinds of trade and industry will always prosper on a small scale and under independent ownership and management. Job printing is one of these for it is an enterprise that renders chiefly services calling for high skill and quick delivery."¹

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BUILDING TRADES

CARPENTER AND MASON

I. Classes of Workers and Nature of Their Work

A. Carpenters

1. The carpenter installs and fits into places the woodwork on buildings of all kinds. He works directly from plans furnished by the architect, or drawn by himself.

2. Carpenter's helper

a. His work is to carry lumber, do rough carpentry work, and assist the carpenter.

B. Bricklayer and Stonemason

1. He lays the stone or bricks on mortar and builds up the walls on a foundation in perfect horizontal as well as perfect vertical lines.

2. Helpers

a. Usually workers learning the trade.

II. Working Conditions Surrounding Those Engaged in This Occupation.

A. Health and Accident

1. The work is outside, and comparatively clean material is handled. Considered a very healthful occupation.

2. The work is not particularly dangerous if reasonable care is taken. The work is done

almost entirely with hand tools of which the worker is the absolute master.¹

3. The average life of masons and bricklayers is 55 years.²

B. Chances for Advancement

1. Carpenters and masons may advance to foremen or to superintendents over certain construction jobs.
2. Most all contractors begin their careers as carpenters or masons.

C. Seasons and Hours of Work

1. These trades are seasonal. In the southwest summer time finds a definite decline in work available in the section. In other regions the reverse is true.
2. The general hours are five to eight-hour days and one four-hour day, but on the W.P.A. projects, the standards are set at thirty hours per week.
3. Very little night work is done in these occupations.
4. Rain often causes carpenters and masons to lose time from their work.

III. Preparation

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1. Meyer, Little and Robinson, Planning Your Future, McGraw-Hill Book Co., N. Y., 1934, p. 79.
 2. Bulletin No. 207, Series 11, U. S. Dept. of Labor.

A. General Educational Requirements

1. Must be able to do general mathematics and understand technical instructions.
2. High school subjects of particular value.
 - a. Shop, woodwork, metal work
 - b. English
 - c. Economics, civics
 - d. General mathematics, geometry
 - e. Mechanical drawing
 - f. Bookkeeping

B. Regulations and Technical Requirements

1. Labor Union Regulations

- a. Beginners must serve four years as an apprentice carpenter before they are admitted as journeymen workers.
- b. At the end of the apprentice period three carpenters on the Examining Board test the candidate for proficiency in his work.
- c. The union dues in the Tucson local are \$3.00 per month.
- d. Men not in the union may work on temporary permits. These permits cost one dollar per day.

2. Technical Training

- a. Many work as helpers for several years and when they become proficient enough to do

the work required, they become Journeymen. Some attend trade schools for technical education.

3. Common deficiencies of present workers

- a. Lack of general education.
- b. Lack of natural ability to do the work.
- c. Lack of proper technical training.

IV. Compensations

A. Union

1. Carpenter Foreman receives \$1.00 per day more than Journeymen carpenters.
2. Journeymen carpenters receive \$1.00 per hour.
3. Apprentice carpenters receive \$.60 per hour the first year and 75 cents afterwards, until they become Journeymen.
4. Carpenter's helpers receive 50 cents per hour.
5. Masons receive \$1.25 per hour.

B. Industrial Compensation

1. All workmen are protected under the Arizona Workmen's Compensation plan.

C. Average Income of Those Engaged in This Kind of Work.

1. Very few carpenters or masons average over ten months of work during a year.
2. Wages vary according to the locality and the size of the city. Carpenters in large cities

receive a higher wage than those in less populated districts.

V. Individual or Special Requirements

A. Personal

1. Must be congenial with co-workers.
2. Must be alert and mechanically minded.
3. Must have a sense of precision and balance.

B. Physical

1. Must be healthy and physically fit to do this work. Must be of average strength.
2. Must have use of both hands and legs.
3. Must have good eyesight.

VI. Types of Tests that Should Help to Determine if a Student is Qualified

A. Mechanical Test¹

"Characteristics measured by the mechanical tests are different from those measured by mental tests. However, they do not justify the belief of many teachers that pupils who are unsuccessful in academic subjects possess the ability required for success in mechanical subjects. Lack of abstract intelligence should not be interpreted as evidence of the possession of mechanical intelligence."

B. School Reports

1. Interest and proficiency in woodwork, mechanical drawing and other courses where the student is required to construct should serve as a guide.

1. Grayson and Kefauver, "Relationship of the Intelligence Quotient and Scores on Mechanical Tests with Success in Industrial Subjects," Vocational Guidance Magazine, February, 1929.

VII. Means of Getting a Position

A. Union

1. Register with the Union and start in as an apprentice workman.
2. Work as a carpenter's helper until some knowledge is gained in the work.

B. Other Means

1. Work as a carpenter's helper, study the problems the carpenter has to solve. After a few years the helper may get work as a carpenter.
2. Attend trade schools part time while learning the trade.

VIII. Supply and Demand

A. In the United States

1. In 1930 there were well over 3,000,000 men engaged in the building trades. 929,426 of these were listed as carpenters and 170,903 as masons or bricklayers.¹
2. In 1930 only 236,284 had regular permanent employment in the building trades.²
3. In 1930 it was estimated that there were 100,000 carpenter apprentices in training.
4. The demand for skilled workers exceeds the supply in the Southwest. This is because of the

1. Fifteenth Census Report, 1930, U. S. Department of Census.
2. Ibid.

many government projects in construction at the present time.

B. In Arizona

1. In 1930 there were 8,082 workers in the building trades; 5,673 were classified as carpenters, 446 as brick and stone masons.¹
2. Of this number 1,102 were unemployed and could not find work.
3. Tucson, Yuma and Phoenix Union officials state that all men in the Union that wish regular work are employed. (June 1936)

IX. Masonry and Carpentry as a Future Trade

- A. In 1934 the federal government passed the National Housing Act in order to help people improve their homes and to assist them in buying new ones. The government sets up a Mortgage Insurance Fund which is used to insure the mortgages given by the home owners to the banks. This has created a very decided increase in construction of homes and there is every indication that this building and improvement program will continue for some time. This should afford employment for carpenters and masons for some time to come.
- B. The number of men training for carpentry and masonry at the present time seems to be at a very low ebb.

1. Fifteenth Census Report, 1930, U. S. Bur. of Census.

Most all carpenters and masons employed on present day construction are over thirty-five years of age.

- C. The trend is away from the use of wood for construction. Steel is taking the place of wood in all types of construction. For example, the window frames and casements of most all new buildings are of steel. They come already hung and framed. Therefore, there is little work for the carpenter to do.
- D. The improvement of attitude on the part of the public toward all types of skilled workers is a matter young people should think of in selecting a career. Workers in these trades enjoy good social standing in most communities.¹
- E. Walter B. Pitkin states as follows,²

"With the impending revolution in housing, the industry will for some time operate on a mass production basis, with pre-fabricated houses the rule. Then farewell to all carpenters, masons, bricklayers, plasterers, lathers, plumbers and painters, and all the other Sons of Yesterday."

- F. For a young person who enjoys constructing and building things and can do them well, there is no doubt a good future in the building trades. The small number training now should enable him to enjoy a position in an occupation that is not overcrowded.
- G. When better times return the public will start

1. Prector, op. cit., p. 169.
2. Pitkin, op. cit., p. 148.

building and constructing. The building trades should be the first to benefit by another period of prosperity.¹

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TRANSPORTATION

AVIATION

I. Classes of Work Connected with Aviation

A. Classes Named and Brief of Each Covering Duties, Technical Training, Special Requirements, Experience Needed, Working Conditions, Salaries, Promotions, and Employment Possibilities.¹

1. Transport Pilot

- a. Supervises the operation of plane in flight. Has full responsibility of plane, passengers and cargo.
- b. Must have complete Master Pilot, Ground and Flying Courses.
- c. Must have Scheduled Air Transport rating, and third class Radio license.
- d. Must have a good history as a pilot and at least 1200 hours co-pilot experience.
- e. Working hours will average about three to four per day.
- f. Salary will average about \$400 per month. Base pay is \$150 to \$250 monthly with mileage pay in addition.
- g. May get promotion to Chief Pilot, Field

1. Aeronautical Occupations Briefs, California State Dept. of Education, Sacramento, Calif., 1932.

Manager or Superintendent of Operations.

- b. The development of air transport business at the present offers some hopes for employment.

2. Co-pilot or Mate

- a. Assists regular pilot in operation of plane, handles radio messages and on some lines acts as steward.
- b. Training, requirements, working conditions, and opportunities are about the same as for pilot.
- c. Receives from \$125 to \$250 per month with traveling allowance.
- d. May be promoted to Pilot or Chief Pilot.

3. Sales Pilot

- a. Demonstrates and sells airplanes.
- b. Must have sales ability and a pleasing personality.
- c. Must have a complete Master Pilot course and general flying experience.
- d. Expanding air traffic, private, commercial, and governmental, makes this a position with a future.

4. Test Pilot

- a. Tests new and rebuilt planes.
- b. Must have Aeronautical Engineer's training

and complete Master Pilot's training.

- c. Must be familiar with all types of planes and motors.
- d. Working conditions are irregular, and pay is according to ability of individual.
- e. Chances for employment are extremely limited.

5. Apprentice Mechanic

- a. Servicing maintenance, and repair of modern aircrafts under supervision.
- b. Must have shop experience, and a master mechanic course.
- c. Salary is from \$100 to \$150 per month for eight to nine hours of work per day.
- d. Many chances for promotion to a Licensed Mechanic or Chief Mechanic. With the increase in planes, opportunities for work should increase.

6. Airplane and Engine Mechanics

- a. Servicing maintenance, and repair of modern aircrafts and engines.
- b. One year experience for airplane mechanics and two years for engine mechanics are required.
- c. Salary is from \$150 to \$200 monthly for eight to nine hours of work per day for six days per week.

- d. Chances for advancement to Chief Mechanic.
- e. Increased interest in aeronautics should bring more opportunities in this field.

7. Radio Operator

- a. Must be radio technician expert.
- b. Must have Aeronautical Radio License, and have had several years experience.
- c. Apprentices receive \$100 to \$125 per month; regular operators, \$125 to \$200 per month.

8. Aeronautical Engineer

- a. Does detail and major designing of aircrafts and airports.
- b. Should have both piloting and mechanic's experience and training.
- c. The field is limited because there are few manufacturing companies.
- d. Salary of \$200 per month with chances for advancement to Chief Engineer.

9. Air Hostess¹

- a. She must serve refreshments, supply reading and writing material and maps to the passengers. She must point out places of interest, relating history of each. She must adjust ventilators, regulate the heat and lock

1. Filene, Catherine, Careers for Women, Houghton Mifflin Co., Boston, 1934.

- after the passengers in general.
- b. She flies five days each week and never more than two days in succession.
 - c. She must learn a brief history of her company, and schedules of its incoming and outgoing planes. She must learn the technical names of the major parts of a plane and other aeronautical terms.
 - d. There is practically no opportunity for advancement as there is only one chief hostess in each company. There is no permanency in the job as the hostess has to retire after she reaches the age of twenty-seven.
 - e. Beginning salary is \$75 per month. Later she receives \$110 per month regardless of her term of service. The company pays all her bills while away from her home port.
 - f. To be considered she must have the following qualifications:
 - 1) Must be between twenty-one and twenty-seven years old.
 - 2) Must not weigh more than 115 pounds.
 - 3) Must not be taller than five feet five inches.

4) Must be attractive and have a pleasing personality.

5) Should have a good education; a degree will help to secure a position.

g. Supply and demand

1) There are more than a thousand applications for each position. Eastern Air Transport, employing only twelve hostesses, has had more than fifteen thousand applicants for these positions.

10. United States Army Flying Cadet¹

a. Qualifications

1) Must be unmarried

2) Must be over twenty and under twenty-seven.

3) Applicant must present a certificate from a recognized college showing he has completed one-half or more of the units necessary for graduation; or pass an examination which is equivalent thereof.

b. Applicant must be of a sound physique and in excellent health.

c. The course of instruction requires one year, eight months at a primary field. Here the cadet has 168 hours of flying and instruction

1. General Information from Headquarters, The Air Corps Primary Flying School, Randolph Field, Texas, 1934.

in airplane engines, navigation, machine guns, and other academic subjects. The remaining four months of work is given at the advanced school with special training given in combat principles and approximately 132 hours in the air.

- d. The base pay of a Flying Cadet is \$75 per month with uniform furnished.
- e. Upon graduation from the air corps training center, Flying Cadets are assigned to a tactical organization for a period of one year. At the end of this period they must serve one year as a second lieutenant, Air Corps Reserve, on active duty. This makes a total of three years of service.
- f. Appointments are filled according to a priority list published by the War Department.

II. Working Conditions Surrounding Those Engaged in This Work

A. Health and Accident

1. In 1928 the total number of accidents was eighty-seven, or one for every 249,482 miles flown. In 1930 there were ninety-eight accidents, or one for every 810,588 miles flown. Total fatalities for these two years respectively show a decline from twenty-one to sixteen.

2. All new planes are being constructed with additional safety features.

III. Preparation

A. Educational Requirements

1. For appointment as a Flying Cadet of the Air Corps, a college education is almost essential.
2. Some private flying schools set high school graduation as a requirement.
3. High school subjects of particular value.
 - a. Algebra, geometry, trigonometry
 - b. History, civics
 - c. English
 - d. General science, physics
 - e. Economics, geography
 - f. Typewriting

B. Colleges or Schools Outstanding in this Field.¹

1. Stanford University, Stanford, California
2. Massachusetts Institute of Technology, Cambridge, Mass.
3. California Institute of Technology, Pasadena, Calif.
4. University of Washington, Seattle, Washington
5. School of Aeronautics, New York University, New York City.

1. Crawford and Clement, The Choice of an Occupation, p. 294.

C. Private Commercial Training Schools

1. Boeing School of Aeronautics, Oakland, Calif.
2. Air-Tech School, San Diego, Calif.
3. Ryon School of Aviation, San Diego, Calif.
4. Many small schools give instruction to prepare one for private flying licenses.

D. Common Deficiencies of Present Workers

1. Failure to observe the rules given them during training.
2. Carelessness
3. Lack of education

IV. Individual or Special Requirements

A. Mental

1. Must be alert, intelligent and able to think quickly.
2. Must be able to meet any dangers or emergencies which might confront him.

B. Physical

1. Must be of superior physical condition.
2. Must not have a weak heart.
3. Must have use of hands and feet.
4. Must have excellent eyesight.

V. Types of Tests that Should Help to Determine if a Student is Qualified for This Work

A. Army

1. A series of physical tests are given applicants

and records are made of his reactions to each test.

B. Aptitude Tests

1. A series of tests to determine mechanical ability would prove of value in this field.

VI. Means of Getting a Position

- A. Apply to companies in the field after one has his license.
- B. Schools ranking high in their field are often able to place their graduates.
- C. Make contacts with those already in the field.
- D. Apply for government service.

VII. Supply and Demand

- A. On July 1, 1931, the United States Department of Commerce reported that there were forty-two companies engaged in transportation of mail, passengers, and express in the United States. The companies operated seventy-three mail, ninety-eight passenger, and sixty-eight express routes, and their planes were flying about 140,000 miles every twenty-four hours.
- B. The report for 1935 shows that there has been only a small increase in number of companies and routes, but the average of miles flown every twenty-four hours exceeded 225,000.
- C. The United States Census, 1930, lists 6,097 persons

having aviation as an occupation in the United States.

- D. The Boeing School of Aviation does not guarantee positions to its graduates, but its placement bureau is in active touch with the aviation industry, aiding many of its graduates to find positions in subsidiaries of United Aircraft and Transport Corporation and other companies. This is also true of other aviation schools of high rank.
- E. Many pilots consider the field overcrowded, poorly paid, and limited as a future vocation.¹

VIII. Prospects of Aviation as a Vocation

- A. Aviation is a new industry, and might even be said to be still in its infancy.
- B. The Adjustment Service of New York City reports overcrowding in all branches of the industry.
- C. The career of a pilot tends to become more and more automatic and mechanically controlled by radio. The day of the daring, spectacular pilot will soon be a thing of the past.
- D. Several leaders in the industry recently stated that they saw few opportunities of any kind in the immediate future. "And," they continued, "nobody can predict very far ahead the possibilities of aviation. The industry is too new and changing too rapidly."¹

1. Pitkin, op. cit., p. 104.

E. The best chances for aviation rest with the development of the low-cost plane industry.¹

F. In any field as new as aviation it is difficult to describe the vocational opportunities. Every month brings many new changes. There are some opportunities today for mechanics and pilots of unusual skill.²

G. The past years have witnessed a gratifying growth and development in commercial and governmental aviation, and with it persons properly trained and qualified have secured good positions. The fact that the aircraft industry is in a stage of rapid development makes entrance into this field very attractive. However, just as in other businesses and professions, the same degree of care must be exercised in choosing the occupation best fitted to one's ability.

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GROCERY STORE SALESMAN

I. Classes of Grocery Store Work

- A. Carry-out boys or "Punks"...They put the customer's purchases in boxes and bags and take them out to cars.
- B. Stockboys...Their work is to keep the shelves stocked, learn where articles are located, and the price of each.
- C. Clerks sell merchandise at retail directly to the public.
- D. Assistant Managers...They usually serve as clerks and do the cashier work in the store.
- E. Managers...They have the responsibility of keeping their stores stocked with supplies from the wholesaler. They also help as clerks or cashiers when there is a rush.
- F. Large establishments have buyers, who handle all purchasing of stock for their store.

II. Working Conditions Surrounding Those Engaged in This Work

A. Health and Accident

- 1. The work is quite healthful, but some workers suffer from nervous strain during the busy seasons or from standing long hours each day.
- 2. Many stores in the Southwest have cooling sys-

tems which make work more comfortable in the summer.

B. Chances for Advancement

1. Promotions are very slow in this line. It is easy to start in this field but very hard to get any place in it.
2. Clerks may become managers and then they often secure jobs with wholesalers as traveling salesmen.
3. In large organizations the best managers are selected to become district buyers or managers.

C. Seasons and Hours of Work

1. On Saturdays and during the Christmas holiday season the work is almost doubled.
2. During July and August there is a decided let-down in business. Many clerks are "let off" for the summer.
3. The regular hours of work are from 8 A.M. to 7 P.M. five days a week, and from 8 A.M. to 11 P.M. on Saturday with one hour off for lunch.
4. Many times workers must return after hours at night to help arrange stock and display goods.

III. Preparation

A. General Educational Requirements

1. A high school education is the minimum required for salesmen in most stores.

2. Must be able to do simple arithmetic rapidly.
3. High school subjects of particular value are:
 - a. Arithmetic and general mathematics
 - b. English
 - c. Penmanship and spelling
 - d. Economics, civics
 - e. Bookkeeping, typing
 - f. Art

B. Common Deficiencies of Present Workers¹

1. Lack of ability to present merchandise to the customer in an effective way.
2. Lack of education.
3. Lack of care in personal appearance.
4. Lack of courtesy and consideration given to customers.

IV. Compensations

A. Salaries of Various Grades of Grocery Store Workers

1. "Punks" receive from \$10 to \$15 per week.
2. Stock clerks \$15 to \$18 per week.
3. Clerks \$20 to \$30 per week.
4. Assistant managers \$25 to \$35 per week.
5. Managers receive \$30 to \$40 per week. Several large chain stores pay managers a base pay of \$25 per week and a 5 to 10 per cent commission

1. "Salesperson," Occupational Studies No. 9, Pittsburgh Public Schools, 1925.

on the net income of the store.

6. Buyers for large stores receive \$50 to \$75 per week.

7. General Managers and Superintendents in large organizations often receive as high as \$7,000 per year.

B. Pensions

1. Some large organizations have pension systems. Very few small stores do anything about it.

C. Industrial Compensation

1. All workers in Arizona are covered by Arizona Industrial Compensation.

D. Average Income of Those Engaged in This Work

1. The salesperson in a retail store will average from \$20 to \$40 per week.¹

2. The average for clerks quoted by a number of grocery store managers in southern Arizona was \$20 to \$25 per week.

V. Individual or Special Requirements

A. Personal²

1. Must be clean, well groomed and present a business-like appearance.

2. Must have a pleasing personality, initiative, tact, and good judgment.

1. Procter, op. cit., p. 217.

2. "Salesperson," op. cit.

3. Must be alert, genuinely courteous to customers, willing to serve, and possess persistence, patience, and friendliness.

B. Physical¹

1. Should have good health, eyesight, hearing and teeth.
2. Should be tall rather than short.
3. Should possess robust constitution for the work requires long hours of standing on one's feet.

VI. Means of Getting a Position

A. Personal Applications

1. Make application to store managers for beginning positions.

B. Advertisements

1. Watch the papers for advertisements for salesmen.
2. Run a want advertisement in the local paper for a job.

C. Written Applications

1. Apply by letter to Superintendents if they are located in another city.

VII. Supply and Demand

A. In the United States²

1. In 1930 there were 1,988,532 salespersons in

1. Meyers, Little and Robinson, op. cit., p. 114.

2. Fifteenth Census of the United States, United States Bureau of Census, 1930.

stores. Of this number 1,445,686 were men and 542,646 were women.

2. There was a total increase of 860,000 salespersons in stores in the last ten years.
3. The number of persons engaged in the trade group of occupations was listed at 6,000,000 in 1930. Of this number 1,700,000 were retail dealers operating their own stores.

B. In Arizona

1. The 1930 Census lists 1,050 persons employed as clerks in stores.¹
2. The Census classifies 4,673 persons as salesmen.²
3. The average store has about a fifty per cent turnover in employees each year.
4. Stores contacted had lists of from ten to twenty-five applicants for positions. Many on these lists were not qualified or fit to fill any type of a position in a grocery store.

VII. Prospects of Clerking in a Grocery Store as an Occupation.

- A. The work in better positions is varied, interesting, and stimulating because of the different types of customers one must deal with during a day's work.

1. Fifteenth Census of the United States, U. S. Bureau of Census, 1930.

2. Ibid.

- B. The training one receives while working in a store should give him the experience needed to become a traveling salesman, or specialty salesman. In this work there is a much better future.
- C. Young men and women with high school and business training whose courses are designed to prepare for retailing will have no difficulty in rising, provided that they are willing to start at the bottom.¹
- D. Over one-third of those engaged in selling things are selling things which they own, or in which they have a certain amount of money invested. They probably worked for someone else at first, saved enough money to make a start and then set up in business for themselves. There is a fascination about being one's own boss, and also a chance that the venture will prove successful and grow into a large business.²
- E. If you are a born salesman, or are greatly attracted to retailing for other reasons, get a first-class training before seeking a job. College training is desirable and in some stores is required of all but ordinary sales jobs.³
- F. Because this vocation is an easy one in which to get a job, many young people get work in stores because

1. "Salesperson," op. cit.

2. Prector, op. cit., p. 216.

3. Pitkin, op. cit.

of necessity and continue to work there even though they are aware that there is very little future for them in this occupation.

- G. As a warning, be careful of selecting this work as a life's vocation unless you have sufficient training to make advancement possible.

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TRADE

SERVICE STATION ATTENDANT

I. Classes of Service Station Jobs and the Work of Each

A. "Flunkies"---Boys fill these jobs while learning in some stations. They fill tires, clean windshields, fill radiators and clean up around the station.

B. Salesmen.---They meet the public, take care of gas and oil, check batteries, do greasing and answer questions.

C. Station Manager.---He has charge of the station and supervises the salesmen. Also checks receipts with the superintendent. He does the same work as the salesmen except that he does less car greasing.

II. Working Conditions Surrounding Those Engaged in This Work

A. Health and Accident

1. The work is rather dirty, but most of it is out in the open. Very few accidents. May be classified as a safe occupation.

B. Chances for Advancement

1. Salesmen are promoted to station managers as soon as they prove they are efficient and able salesmen. Promotions are made according to seniority when there are openings.

D. Seasons and Hours of Work

1. The winter season brings about 35 to 40 per cent more business than the summer seasons in Southern Arizona.
2. The standard week is 48 hours under the governmental plan that the oil companies work under.

III. Preparation

A. Educational Requirements

1. The requirement is at least a high school education, and nearly all employees have some college training.
2. High school subjects of particular value
 - a. English
 - b. Mathematics
 - c. Bookkeeping
 - d. Oral English
 - e. General science
 - f. Geography

B. Regulations and Technical Requirements

1. Training schools are operated by several of the large oil companies. When a person is given a job he must go to this training school for ten to fifteen days training. Nearly all training stations for Arizona are located in Phoenix.
 - a. The student learns the accounting form used by the company, the service procedure, and

methods of lubrication. At the end of the training period the student is examined by the training school instructor. A passing grade must be made to get a job.

2. Unions

a. Standard Stations, Inc., employees have an employees' association which meets with the divisional superintendent in San Francisco each year to work out problems of the employee.

3. Qualifications required

a. Age.---Very few are ever employed in the company stations under twenty-one years of age. Many independent stations employ those of less age, but there is less chance for promotion here.

b. Little or no previous experience is required by those applying.

C. Common Deficiencies of Present Workers

1. Procrastination heads the list given by many station managers. The men put off doing their work till a later date until it is in such a condition that they have to be spoken to, and this brings a black mark against them. A few cases of lack of courtesy have caused dismissal.

D. Compensation

1. Salaries

- a. "Flunkies" receive about \$10-\$15 per week.
- b. Salesmen start at salaries ranging from \$75 to \$95 per month.
- c. After about one year most salesmen are in positions that bring them around \$100 per month.
- d. Station managers receive from \$125-\$175 per month depending upon the location of their stations. In addition they receive a raise if their stations do a certain amount of additional business for one year.
- e. Standard stations pay each attendant a commission on the gross receipts of the station. For example, $\frac{1}{2}$ cent per gallon of gas sold is given as a commission to the attendants of that station. All commissions are equally divided among the employees of that station.

2. Pensions

- a. Standard Stations, Inc., have an annuity old age pension plan to which each employee is required to contribute 4 per cent of his income. The company contributes a like amount. The retirement age is sixty years.
- b. Several other large companies have similar

pension plans.

3. Health insurance

- a. Employees receive 50 per cent of their regular salary for 26 weeks after one year's service. This is for sickness or injury off duty.

4. Industrial compensation

- a. All employees are covered by Arizona Workmen's Compensation.

5. Average income of those engaged in this kind of work.

- a. The average of those employed in one large system of stations in Arizona was placed at \$100 per month by a superintendent of the company. In Yuma the average of gas station employees checked was about \$90 monthly.

V. Individual or Special Requirements

- A. Must be of good health and of average size and weight.
- B. Must be able to meet the public and be a good salesman.
- C. Must be able to make friends so that patrons will return there for service.

VI. Types of Tests that Should Help Determine if a Student is Qualified for This Work

- A. Trade tests have been developed to a point where

they show a definite correlation between occupations and resulting scores of the tests. Trade tests, and aptitude tests both could be used to aid the guidance teacher.¹

VII. Means of Getting a Position

A. Where to Apply

1. Men for company stations are employed by the district superintendent. He makes his selection on references, personal history, and personal opinion of applicant's abilities.
2. In smaller stations apply to the owner. If necessary take a job on condition that if you make good you are to receive a better wage.
3. Watch for openings and try to pick a station that has a good location.

VIII. Supply and Demand

A. Arizona

1. The 15th Census of the United States lists 2,310 gainfully employed in auto agencies and filling stations while 57 were working part time and 131 were out of work and couldn't find work. It also lists 2,021 gainfully employed persons in garages and greasing stations with 99 employed part time and 95 out of work and unable

1. Cohen, I. David, Principles and Practices of Vocational Guidance, Century Co., New York, 1929, p. 153.

to find work.

2. In the city of Yuma there are about 26 service stations employing about 45 men. Over 70 per cent are owned and operated by private owners who generally do not employ much outside help.
3. One large company operating a system of stations in Arizona employs about 225 employees. The number of new men added each year in Arizona was estimated to be 25.
4. The supply of men available greatly exceeds the demand.

IX. Prospects or Future as a Service Station Salesman

- A. In the small independent station one may safely say the future is nil. The possibility of ownership of a station may give some hopes, but the majority of service station owners contacted were not very enthusiastic about their business.
- B. The competition in this line makes it almost impossible for the small station to compete with the larger ones that can offer the many conveniences and services demanded by the public today.
- C. Several oil companies have organized selling units or subsidiaries. Standard Oil of California, Shell Oil, Union Oil, Texaco, Conoco and others operate such retail agencies. The best prospects for a boy who wants to go into this occupation is with one of

these larger companies. The salary may not be exceptionally high, but they do offer health insurance and have a retirement plan set up for their employees.

D. The future in this occupation cannot be classed as very hopeful. Unless one is willing to go into an already overcrowded vocation, he had best look elsewhere for employment.

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PUBLIC SERVICE

POSTAL CLERK

I. Classes of Postal Clerks and Their Work

A. Classes Named¹

1. Substitute positions

a. Substitutes work when there is too much work for regular clerks to handle. Substitutes are required to be available on short notice, and their employment may consist of only a few hours a day or week.

2. First grade to Fifth grade clerks.

a. Sort mail, distribute mail and do any other duties in the office that the postmaster may direct.

3. Special clerks---First grade to Second grade

a. Handle postal savings, money orders and registered mail.

4. In first class post offices one may advance to a supervisory position, i.e., Superintendent of Mails, etc.

5. The highest position one may fill under Civil Service in the postal department is Assistant Postmaster.

1. Postal Laws and Regulations, 1932, U. S. Post Office Dept., United States Printing Office, Washington, D. C., 1932.

B. Associates

1. The post office department personnel is recognized as of a higher level than that of the average business concern.

C. Chances for Advancement

1. If vacancies exist or develop for clerks or carriers, substitutes fill these vacancies. But in most post offices at the present time, enough have taken the examination and are on the eligible list to fill any vacancies that might occur within the next three years. The Yuma Post Office has eight substitutes on its list at present.
2. Once appointed a regular postal clerk or carrier, one may advance from First Grade to Fifth grade, advancing one grade per year.
3. Advancing from Fifth class to Special clerk one must be 98 per cent efficient and be able to throw not less than eighteen cards per minute correctly in the mail sorting test.
4. The positions of Superintendent of Mail, etc., are filled from the First class clerks. The offices are filled by seniority and score made in Civil Service tests. It is only in the larger post offices that these jobs are found.
5. The position of Assistant Postmaster is the

highest position one may attain in a post office.

D. Seasons and Hours of Work¹

1. The hours of work consist of five eight-hour days and one four-hour day on Saturday.
2. Each employee after one year's service is entitled to fifteen days vacation with pay.
3. For night work all regular employees in First and Second class post offices shall be paid extra at the rate of 10 per cent of their hourly pay per day.
4. Christmas time always brings additional work, but during the rest of the year the work is fairly regular. In Yuma there is a decided drop in business during the summer months.

III. Preparation

A. General Educational Requirements

1. One of the few positions under Civil Service that one may qualify for without a college education.
2. According to postmasters' reports it is almost necessary for an applicant to have a high school education to qualify.
3. High school subjects of particular value.
 - a. English

1. Postal Laws and Regulations, 1932, U. S. Post Office Department, United States Printing Office, Washington, D. C., 1932.

- b. Penmanship and spelling
- c. General mathematics
- d. Civics
- e. Social problems
- f. Typing
- g. Office practice
- h. Geography

B. Regulations and Technical Requirements.¹

1. All clerks in first and second class post offices must take a proficiency mail sorting test each year. They must pass this test by a score of at least 95 per cent.
2. To advance from fifth class work to special clerk one must average 98 per cent efficient and be able to throw not less than eighteen cards per minute correctly.
3. Postal employees may form unions, but they shall not strike or take any unified action against the United States.
4. Qualifications applicants must possess²
 - a. Citizenship---They must be citizens of the United States.
 - b. Age---They must have reached their eighteenth but not their forty-fifth birthday on the

1. Postal Laws and Regulations, 1932, op. cit.

2. "Substitute Clerk-Carrier, Post Office Service," United States Civil Service Examination.

date of the close of receipt of applications. Age limits do not apply to persons granted preference because of military or naval service, except that such applicants must not have reached the retirement age.

- c. Physical ability---They must measure at least 5 feet, 4 inches. Male applicants must weigh at least 125 pounds in ordinary clothing, without overcoat or hat, and female applicants 120 pounds. These weights must be maintained at the time of examination and appointment. Height and weight requirements do not apply to persons entitled to preference because of military or naval service. Applicants must have such health and freedom from physical defects as will enable them to meet the rigid physical standard which the Department or the Commission deem necessary to perform the duties of the position. Persons selected for appointment will be required to pass a physical examination given by a Federal medical officer. Failure to pass such a physical examination will prevent appointment, except that with respect to certain defects the requirements may be waived in the case of honorably discharged

soldiers, sailors, and marines who establish disability preference.

- d. Applicants must be filed long before the actual test is given. A definite closing date is printed on each announcement sheet.
- e. Non-patrons of a post office who wish to be considered "local eligibles" within the meaning of the certification paragraph, must furnish with their applications evidence showing that they reside nearer the office of examination than the office through which they receive their mail.
- f. Photographs---Each applicant will be required to submit to the examiner on the day of the examination his photograph, taken within two years, with his name written thereon, and securely pasted in the space provided on the admission card sent to the applicant after the application is filed. Group photographs or proofs will not be accepted. Photographs will not be returned to the applicants.
- g. Certification---In filling vacancies, certification will be made of local eligibles--- that is, of bona fide patrons of the post office for which the examination is announced.

and of non-patrons who present with their applications satisfactory evidence showing that the office for which the examination is announced is nearer their home than the office through which they receive their mail. No person, however, who lives within the city delivery zone of a first or second-class post office may be considered as local to any other post office. Non-local eligibles will not be considered for appointment unless the register of local eligibles is exhausted.

h. Fingerprints---Fingerprints will be taken of all persons appointed from the examination.

5. Causes for Removal¹

- a. Committing an offense involving moral turpitude or tending to bring the service into disrepute or disrespect.
- b. An employee may be removed when his removal will promote the efficiency of the service.
- c. The accused must be notified in writing and given reasonable time to justify his actions.
- d. An appeal may be made to the Civil Service Commission if dismissal is unfair.

C. Common Deficiencies of Present Workers.

- 1. Lack of education.

1. Postal Laws and Regulations, 1932, op. cit.

2. Many postal workers claim that poor service is often rendered because the post office does not have enough employees to handle the work.

IV. Compensation

A. Salaries¹

1. The basic rate of pay for substitutes is 65 cents per hour.
2. For regular employment the initial basic salary for clerks in offices of the first and second classes and carriers in the City Delivery Service is \$1,700 per annum.
3. Clerks in offices of first and second classes and carriers in the City Delivery Service are divided into five grades, the basic salaries of which are \$1,700, \$1,800, \$1,900, \$2,000 and \$2,100 per annum respectively, and will be promoted successively after one year's satisfactory service in each grade, to the next higher grade until the fifth grade is reached.
4. Special clerks---First class \$2,200 and Second class \$2,300.
5. Under an act of Congress, automatic promotions in salary have been suspended, as a measure of economy.
6. In post offices where the receipts are over

1. Postal Laws and Regulations, 1932, op. cit.

\$40,000 per year they are classified as first class post offices and there are more chances for advancement to supervisory positions drawing a salary of \$2,400 to \$3,000.

7. The salary of each position above special clerks increases with the receipts of the post office. Assistant Post Masters in post offices where the receipts are over \$20,000,000 receive \$4,800 to \$4,900 per year.

B. Pensions¹

1. Each federal employee under Civil Service has three and one-half per cent of his pay deducted for retirement.
 - a. This is used to create an annuity for the employee when he reaches retirement age; 60-65, depending upon the work in which he is engaged.
2. The Federal Government will pay as a retirement \$30 per year for each year of service not exceeding thirty years.
3. If the sum of the employee's annuity and the government contribution does not give a yearly pension equal to \$1200, the government will add the difference to make the yearly income that

1. National Federation of Federal Employees, "Methods of Computing Annuities and Other Essential Information in Regard to Retirement Act of May 29, 1930."

amount.

4. Higher paid officers may only receive a retirement income equal to three-fourths of their regular salary.

C. Health Insurance

1. After five years of service if an employee is unable to continue his work due to disease or injury not in the line of duty, he will receive an income of \$30 per year for each year of service in addition to a return from his annuity.
2. For each year of full employment an employee is allowed ten days sick leave with pay.

D. Workmen's Compensation

1. If injured in line of duty an employee receives compensation equal to $56 \frac{2}{3}$ per cent of his monthly pay, with \$116.66 set as the maximum and \$58.33 set as the minimum.
2. All medical and hospital expenses will be paid by the government.
3. Burial

- a. The federal government will pay burial expenses up to \$200.

E. Average Income of Those Engaged in This Kind of Work

1. The average income of employees in the District

of Columbia as of October 1928 was \$1,821.86.¹

2. Many interviewed in the Postal Service felt that salary raises were very slow.
3. Others stated that as a general group most all clerks were receiving the salary of the lowest grade clerk.

V. Individual or Special Requirements

A. Mental

1. A person must have a fair degree of intelligence to be able to do the problems in routing and sorting mail. The civil service tests have problems concerning each which one taking the test will have to solve.

B. Physical

1. (Fully covered under Regulations and Technical Requirements.)

VI. Types of Tests that Should Help to Determine if a Student is Qualified for this Work

- A. Intelligence test scores will give a general clue as to whether the student can pass the routing and sorting tests.
- B. A student must have at least average grades in school to make a high score on the civil service examination to be placed on the eligible list.

1. Feldman, Herman, "A Personnel Program for Federal Civil Service," House Document No. 773, 71st Congress, 3rd Session, p. 263.

VII. Means of Getting a Position

- A. The Civil Service Commission sends out from time to time notices of examinations to be given. These notices are posted in each post office and about one month is allowed for an applicant to get in his application blank.
- B. These blanks may be secured from the postmaster or one he has designated as civil service clerk.
- C. After the application has been filled out and sent in, each person qualified to take the examination will be notified to appear at the local examining room for his examination.
- D. After the examination has been taken and passed, all one can do is wait to be called for substitute work.

VIII. Supply and Demand

- A. In Arizona
 1. The United States Census for 1930 lists 730 gainfully employed workers in the postal service.
 2. Of this number, 202 were women.
 3. According to reports of Yuma and Tucson postmasters, enough applied to take the last examination to fill the existing vacancies twenty times.
 4. There are few unemployed, for new examinations

are not given until vacancies occur.

IX. Prospects of Postal Service Work as a Vocation

A. Government work as a rule pays the beginner better than most private work.¹

B. Government work is sure. One knows that his employer's business will not fail and leave him without a job.²

C. Civil Service is organized on a non-political basis. The changes of administration do not affect one's job.

D. The boy entering at the bottom as a clerk may in most cases successively rise to higher positions in his department. Those lacking qualifications for advancement may, on acquiring them as they go, usually take examinations for higher posts.³

E. The working conditions of the postal employes have not always been ideal. Poor working conditions exist even today in many of the smaller post offices.⁴

F. The conditions existing in the department several administrations back were deplorable. Men were demoted, dismissed, penalized, frequently for trivial reasons or because of personal prejudices

1. Hopkins, Earl P., Civil Service as a Career, p. 12.

2. Ibid., p. 13.

3. Feldman, op. cit., p. 118.

4. Ibid., p. 117.

on the part of superiors. Little opportunity was given the employee for self expression. The privilege of appeal was allowed but minor officials, handling the appeal, confirmed the particular post office's ruling.¹

G. Walter Pitkin states as follows in regard to civil service employment.²

"Not today but before long there will be a round million opportunities to work for the public. With each passing month, taxpayers grow wearier of incompetence and crookedness among their officials and lesser servants. Standards for every public service from the humblest to the highest are being raised. Here is your chance. But you must seize it. Nobody will toss it into your mouth hot and buttered."

H. Some of the disadvantages of Civil Service are:

promotions to higher grades are very slow, a man is never his own master, must always await orders from someone higher up, the incentive for strenuous effort is rather small, and the worker may lose ambition and initiative and become a mere cog in a great machine.³

I. Advantages of Civil Service are permanence of position during good behavior after one has passed the probationary period. The pay is increased

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1. Frankel, Lee K., "Personnel Work in the Post Office Department," Political Science Quarterly, Jan. 1928, pp. 150-151.
 2. Pitkin, op. cit.
 3. Proctor, op. cit.

fairly regularly up to a comfortable level. The hours are short, vacations are assured, and provisions are made for retiring allowances. Promotions, though slow, are relatively sure.¹

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PROFESSIONAL

SCHOOL TEACHER

I. Classes of Teachers and Nature of Their Work

A. Classes Named and Brief of Each

1. Kindergarten teacher's work is socializing the child before he starts his regular work in the first grade.
2. The primary teacher's work includes the first and second grades. She continues the work of socialization and at the same time she starts the children in the basic subjects.
3. Elementary teachers have charge of the grades below high school. In larger schools each teacher has only one class. If the school operates on a departmental basis, each teacher will teach only one or two subjects.
4. Secondary teachers have trained in special subjects and instruct in the junior high and senior high schools.
5. College instructors are expected to be specialists in their own lines, and most of them in the standard colleges have a Doctor's degree in the line of their special subject.

II. Working Conditions Surrounding Those Engaged in This Occupation.

A. Health and Accident

1. This profession is one of the healthiest of any of the professions.
2. Accidents are at the very minimum.

B. Chances for Advancement.

1. Elementary.

- a. The teacher in the grades may advance in her work to a supervisor, then to an administrator or director over all of this work.
- b. She may advance into secondary education if she is qualified.

2. Secondary.

- a. May become head of the department in which he or she teaches.
- b. May get administrator's credentials and become a principal or supervisor.

3. College Instructors

- a. May become heads of their departments, or deans in their colleges.
- b. College presidents are generally selected from the most outstanding heads of departments in a college.

D. Seasons and Hours of Work

1. The teacher works from September to June with three months vacation, usually without pay.
2. The average time that a teacher has to be at

school is from 8: 30 A. M. to 4:00 P. M. This is not all the time a teacher spends on school work, for she must correct papers, prepare lessons and gather outside material for her classes.

III. Preparation

A. General Educational Requirements

1. High school subjects of particular value

- a. English
- b. Economics
- c. General science, biology, chemistry
- d. Mathematics
- e. Typewriting
- f. Languages (Latin or Spanish)
- g. Physical education
- h. Extra-curricular activities

B. Regulations and Technical Requirements

1. Regulations in the State of Arizona¹

a. Kindergarten-Primary

- 1) Graduation from a four year kindergarten-primary course of an accredited college.
- 2) Shall include a major of thirty units in education, psychology, and kindergarten-

primary courses .

b. Elementary

- 1) Graduation from a four-year course in an accredited teacher training institution authorized to train elementary teachers.
- 2) Shall have a major of twenty-four units in education and psychology, including eight units of practice teaching, four of which must be in the elementary grades.

c. Secondary

- 1) Must have a bachelor's degree from an accredited college or university authorized to train teachers.
- 2) Must have completed thirty units of graduate work acceptable toward an advanced degree at the University of Arizona or other accredited schools.
- 3) Must have a major (twenty-four units) and a minor (fifteen units) in subjects usually taught in high schools or a major in a non-high school field and two minors in subjects usually taught in high school.
- 4) Must have twenty-four units in education.
 - a) Courses in general psychology; educational psychology; educational measurements; aims, principles, and practices of secondary education; and the

philosophy or history of education.

d. Special certificates

- 1) Granted for teachers in special fields.
- 2) Must have graduated from a four year course at an accredited school.
- 3) Must have completed thirty units in this special field.
- 4) Must have completed eighteen units in education.

2. College instructors¹

- a. Usually selected from among the most promising graduate students.
- b. Selection is made on their scholarship, teaching ability, skill in research, and probability of social service.
- c. A Doctor of Philosophy degree is now almost an absolute necessity before one can hope for advancement in a college position.

3. Colleges and universities outstanding in the field of education.

a. Elementary

- 1) Arizona State Teachers College, Tempe, Arizona
- 2) Arizona State Teachers College, Flagstaff,

1. Proctor, op. cit., p. 327.

Arizona

- 3) University of Arizona, Tucson, Arizona
- 4) University of California at Los Angeles, Westwood, California.
- 5) Other colleges of recognized standing.

b. Secondary

- 1) University of Arizona, Tucson, Arizona
- 2) Stanford University, Stanford, California
- 3) University of California, Berkeley, California.
- 4) University of Southern California, Los Angeles, California
- 5) Teachers College, Columbia University, New York City
- 6) University of Chicago, Chicago, Illinois
- 7) Other recognized schools giving graduate work.

C. Common Deficiencies of Present Workers

1. Lack of proper training.
2. Lack of patience with students.
3. Poor personality, inability to command respect of students.
4. Unfriendly attitude toward pupils and teachers.
5. Failure to maintain high social, moral and ethical standards.

D. Causes of Removal

1. Inefficient teaching
2. Politics
3. Marriage
4. Indiscrete conduct

IV. Compensations

A. Salaries

1. Elementary teacher

- a. In one room rural schools, they receive average salaries of \$735.00 per year, and there are 170,000 such teachers.¹
- b. In consolidated rural schools, they receive an average of \$1000 per year.¹
- c. In villages and cities with population of 2,500 and over, they receive an average of \$1150.¹
- d. In cities over 100,000 inhabitants, the elementary teacher averages about \$1800 per year.¹
- e. The average salary of the elementary teacher in Arizona for 1934 was \$1,321.36.²
- f. The average salary of elementary teachers in Yuma County for 1934 was \$1,234.55.²
- g. The maximum salary in Arizona for 1934 was \$1,620.00 and the minimum was \$900.00.²

1. Procter, *op. cit.*, p. 325.

2. 12th Biennial Report of the State Supt. of Public Instruction to the Governor of the State of Ariz., 1934, p.104.

2. Secondary teachers

a. Salaries of rural high school teachers for 1928 were \$800 to \$1500.¹

b. Teachers in cities of 2,000 to 5,000 population received from \$1000 to \$2000, and in cities of 5,000 to 100,000 population the salaries were from \$1200 to \$2500.¹

c. The National Educational Association Research Bulletin for May 1931 gives \$1,876 as the average for senior high school teachers in cities of 10,000 to 30,000 population.

d. The average for men in Arizona for 1934 was \$1,907.27. The average for women was \$1,680. The average for all high school teachers in Arizona was \$1,764.24 in 1934.²

3. Only one-half of the 800,000 public school teachers receive salaries of \$1200 or over per year.³

4. College Teachers⁴

a. Instructors' salaries average \$1500 to \$2500.

b. Assistant Professors' average \$1800 to \$3600.

c. Associate Professors' average \$2500 to \$5000.

d. Professors' salaries average \$3000 to \$7,500.

5. Administrators

1. Proctor, op. cit., p. 325.

2. 12th Biennial Report, op. cit., p. 104.

3. Ibid.

4. Proctor, op. cit., p. 325.

- a. Elementary principals receive average salaries from \$1350 in rural schools to \$3,500 in large cities.
- b. High school principals receive from \$1500 in rural communities to \$5,000 in larger cities.

B. Pensions

1. Many states have well organized pension systems, the teachers contributing a certain per cent of their salaries toward building up an annuity.
2. Arizona does not have an organized system. Before they are pensioned they must be sixty years of age, must have taught thirty years, the last fifteen years in Arizona. Each teacher is to receive \$50 per month the rest of his life. The money is appropriated by the State Legislature each session.

V. Individual or Special Requirements

A. Personal¹

1. Must have the ability to cooperate.
2. Must have tact, good humor and self control.
3. Must be diligent and honest.
4. Must possess patience and a sympathetic attitude toward the child's problems.

1. Hill, C. M., Readings in Vocational Life, Ginn & Co., New York, 1930, p. 500.

5. Must have ability to maintain classroom discipline and command the respect of the pupils.
6. Must possess high ideals.
7. Must be able to impart information.

B. Physical

1. Must have good health.
2. Must not have any outstanding deformities or nervous habits.
3. Must have good eyesight and hearing.
4. Must have a good voice and plain diction.

VI. Types of Tests that Should Help to Determine if a Student is Qualified for this Work.

- A. The prospective teacher should have the ability to do good class work as a student.
- B. Several aptitude tests have been worked out for teachers. The Hughe's Rating Scale was devised to rate individual capacities, attitudes, and interests.
- C. The results of the Army Alpha tests show that high school and college teachers ranked next to the highest of the forty-one occupations tested.

VII. Means of Getting a Position.¹

A. Applications by the Individual Teachers

1. This method secured positions for over sixty

1. "Selection and Appointment of Teachers," Bulletin 1932, No. 17, U. S. Department of the Interior, Office of Education.

per cent of the new teachers employed in the year 1929-1930.

2. This is one of the most common methods used in all parts of the United States.

B. Placement Bureaus of Higher Institutions

1. This method secured about twenty per cent of the positions filled by new teachers in 1929-1930.

C. Private Teacher's Agencies

1. This method secured about twelve per cent of the positions filled by new teachers in 1929-1930.

D. Other Methods

1. State appointment bureaus.

2. State Teachers' Association bureaus.

3. Visits of administrators to institutions of higher learning.

4. Lists from higher institutions of candidates available.

5. City teacher training schools.

E. In the final selection, in more than ninety-one per cent of the systems, new teachers are either nominated or appointed by the superintendent. As the size of the school decreases, the part taken by the board of education in the selection of new teachers tends to increase.

VIII. Supply and Demand

A. United States

1. The 1930 Census classifies 1,044,016 persons in the United States as teachers.
2. Of these 800,000 are public school teachers.¹
3. In 1929 there were over 250,000 students in normal schools and teacher training colleges preparing to be teachers.

B. Arizona²

1. There were 1,316 elementary school teachers and 776 high school teachers in Arizona in 1934.
2. In Yuma County there were sixty-nine elementary and twenty-seven high school teachers.
3. There were 159 new secondary teachers employed in Arizona in 1934-1935. Of this number fifty-five had less than one year's teaching experience.²

IX. Prospects of Teaching as a Vocation

- A. The teacher occupies a position of respect and is privileged to contribute to the social and spiritual development of the community.
- B. It is interesting to observe that "Who's Who in America" lists among the nationally prominent more persons engaged in teaching than in any other vocation.

1. 12th Biennial Report, *op. cit.*, pp. 103-104.

2. Garretson, O. K., The Status of Secondary Education in the State of Arizona, 1934-35.

- C. The salary of a teacher is usually smaller than could be demanded in another vocation with the same amount of training. But the position of influence which the teacher attains and the contribution which he makes to social progress help to offset the smaller financial return.¹
- D. The teacher of the future will necessarily have a better education than the teacher of the past. Most all states now require one full year of graduate work before they will grant a secondary certificate. Elementary teachers must be graduates of a four-year course in any accredited teacher-training institution to secure their certificates.
- E. Walter Pitkin states,²

"In February 1933 the supply of teachers was large enough to meet the needs of the elementary school system for the next ten years.

"The oversupply is particularly acute in New York City, Massachusetts, California, Washington, New Jersey, Pennsylvania, and Wisconsin. Today the field is glutted with the incompetent. In 1930-31 twenty per cent of our public school teachers had less than two years preparation beyond the completion of a standard high school.

"There is need for able teachers. But they will have their troubles finding jobs. There is still too much petty politics in winning appointments. Do not let this deter you if you are a "born" teacher and you are willing to take a chance of unemployment for several years after you leave school."

1. Procter, op. cit., p. 328.

2. Pitkin, op. cit., p. 66.

F. Most all graduates with good records from Arizona Teacher Training Schools have been placed during the last few years.

G. The subjects that will be of more increasing importance are: social science subjects, practical psychology guidance work, and geography of North America.¹

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NURSING

I. Classes of Nurses and Nature of Their Work

- A. Private Duty--the nurse goes into the home or has only one patient.
- B. Public Health--school, county health units, visiting nurse, etc.
- C. Institutional, Public Health, Hospital or Sanitarium.
 - 1. Private and public hospitals.
 - 2. U. S. Indian Service.
 - 3. U. S. Veteran Bureau nurses.
 - 4. The Army Nurse Corps.
 - 5. Navy Nurse Corps.
 - 6. The U. S. Public Health Service.
- D. Office Nurses--in doctors' and dentists' offices.
- E. Practical Nurses--they have not had recognized training. Will not be employed by institutions of standing.

II. Working Conditions Surrounding Those Engaged in This Occupation

A. Health and Accident

- 1. The most rigid care must be exercised in taking protective precautions against the many types of diseases that they have to deal with.
- 2. It is an occupation that is hard on those of a frail constitution--long hours on their feet

tend to cause breakdowns and inability to work.

B. Associates

1. Contacts are made with all kinds of people both of standing and those of a lower level. It is up to the nurse to make friends with the desirable people she meets.

C. Chances for Advancement.

1. If she continues in college work and gets a degree she can advance to instructress or be a superintendent of nurses. From this she may advance to a superintendent of a hospital.
2. In government service regular periods of salary advance is three years.

D. Time and Hours of Work.¹

1. Private Duty

- a. Subject to call at any time at the following rates:

8 hours--\$5.00 12 hours--\$6.00 20 hours--
\$7.00.

- b. Hourly nursing--\$1.00 for the first hour and fifty cents thereafter. (average)

2. Public Service

- a. Regular hours--42 hour week average.

3. Institutional

I. Greenleaf, Walter J., "Nursing," Guidance Leaflet #15, U. S. Department of Interior, Office of Education.

- a. Regular hours of work--average 58 hours for the week.

III. Preparation

A. General Educational Requirements.

1. Four years in high school.
2. Thirty-six months in training.
3. Eighteen years minimum age to start training.
4. High school subjects of particular value.

a. Sciences

- 1) Chemistry, physics, biology, anatomy, and hygiene.

b. Mathematics.

c. Penmanship and spelling.

B. Regulations and Technical Requirements

1. Arizona State Laws¹

- a. Must be 20 years of age to become licensed.
- b. Thirty-six month course in an accredited school and all Arizona schools are accredited.
- c. Must pass an examination on the following subjects with an average of 75% for all subjects, no subject lower than 70%.
 - 1) Anatomy and Physiology.
 - 2) Ethics and History of Nursing.
 - 3) Bacteriology and Hygiene.
 - 4) Communicable Diseases.

- 5) Pedratria and Orthropedics.
- 6) Dietetics.
- 7) Surgical Nursing.
- 8) Materia Medica.
- 9) Urinalysis.
- 10) Obstetrics and Gynecology.
- 11) Medical Nursing.

d. Other Regulations.

- 1) Must pay \$10 for license and \$1 each year to register. Entitled to use R. N. after their name after registered.

e. Revoke of License.

- 1) Dishonest, theft, use of dope, intoxication on duty.
- 2) May appeal to Superior Court for trial.

C. Common Deficiencies of Present Nurses

1. Spelling bad.
2. Lack of tact.
3. Talk too much.
4. Carelessness, indifference.
5. In the profession only for the money.
6. Mediocre training in small, poorly-equipped nursing training schools.

D. Nursing Training School of Arizona.

1. Good Samaritan Hospital, Phoenix, Arizona
2. St. Joseph Hospital, Phoenix, Arizona

3. St. Mary's Hospital, Tucson, Arizona

4. Sage Memorial Hospital, Ganado, Arizona.

a. Training for Indian students only.

E. Costs

1. Costs \$30 to \$50-60 to enroll, \$30 if student furnishes own uniform; \$60 if school furnishes it.
2. Board, room, and laundry is taken care of by the institution.
3. Text books are extra; must be paid for by the student.

IV. Remuneration

A. State Law

1. None.

B. Salaries of various classes.

1. Public health service--\$110-\$150 per month.
2. Institutional Nurses--\$40-\$150 per month with complete or partial maintenance.
3. Private Duty--\$50-\$150 per month.
 - a. In large cities nurses register and pay a fee; then they are called by the Secretary of the Association. The nurse must please the doctor as well as the patient if she wants to be called again soon.

C. Average Income of Those Engaged.¹

1. Burgess, Mary A., Nurses, Patients and Pocketbooks.
Director, committee on the grading of nurses' schools.

1. Private duty nurses medium salary has been found to be about \$1,297. Some earned as high as \$3,600.
2. Public health nurses medium has been found to be about \$1,685, with a range up to \$6,000.
3. Institutional nurses earned a medium of \$2,000 up to \$9,200, including \$500 for maintenance.
4. Practical nurses work for about average of \$2 to \$3 per day. They serve in more or less the capacity of housekeeper.

V. Individual or Special Requirements

A. Mental.

1. Only students that like this type of work and ones that are in the upper one-half of their class should be encouraged to become nurses.
2. A year or so of college is a great help in preparing for nursing. The Secretary of the State Board of Nurse Examiners recommends all have one year of advanced work after high school graduation before entering a nursing school.
3. Students should be: alert, sympathetic, able to anticipate needs, and be able to understand human behavior.
4. Accuracy in taking and following directions is of utmost importance and common sense and good judgment are also essential. Adaptability, a

pleasing personality, a cheerful disposition, patience, neatness, and an interest in people are great arts and assets. Tact is a nurse's most valuable characteristic.¹

B. Physical

1. Physical defects of any kind.
2. Strong body; belief is that a small body is best.
3. Must have excellent health.
4. Ability to stand a good part of each day without tiring.

VI. Types of Tests That Should Help to Determine if a Student is Qualified for This Work.

A. Intelligence.

1. Very few schools require intelligence tests but they do require that the applicants be in the upper half of their class.

B. Teachers' Reports.

1. One nursing school asks this question of the Dean of the Student's School, "If you were sick, would you want this girl to take care of you?"

C. Aptitude Tests.

1. Many nursing schools require students to pass an aptitude test before accepting them.²

1. Cooley, Emma Pritchard, "Nursing as a Profession." Director of Vocational Guidance. New Orleans, New Orleans Vocational Informational Service Series #1.

2. "So You Want to be a Nurse," Nursing Information Bureau of the American Nurses' Association, New York, 1935.

VII. Means of Getting a Position

A. Hospital or Institutional

1. Prove your worth while training. A good recommendation is a great help.
2. Probably the greatest opportunity to get experience here. "Staff nurses" for more and more institutions are employing graduate nurses to nurse their patients.
3. Contacts can be made here for a good nurse so she may find other work or promotion in this field. Salaries for this type of work are about \$60 per month, maintenance provided.

B. Special Duty work.

1. Register with nurses' organization of your city. Wait for a call.
2. When you get a chance, do good work; please patient and doctor, and you will be called again.

C. Extension Work

1. Take courses that will qualify you for public health service.

D. Take advantage of your opportunities.

VIII. Supply and Demand

A. Arizona

1. There are 900 R. N. in Arizona working.
2. Of the unemployed nurses in Arizona from 60 to 75% are private duty nurses.

3. There are a large number of government nurses employed in Arizona in Veteran Service and Indian Service. They have steady work and do not compete for work with other nurses of the State.

4. An estimate was given at 65 for the number of nurses passing the State examination each year.

B. United States

1. In 1920 there were only 149,128 trained nurses employed in the United States but we find that by 1930 the number has increased to 294,189, a tremendous increase for a ten year period. Of this number, only 5,452 were unemployed.¹

2. The field of nursing is limited to women almost entirely; it is a woman's occupation. Of the 294,189 nurses in 1930, 288,737 of them were women.²

3. There are about 25,000 nurses coming into the profession each year. Of this number half will not be eligible for the openings now vacant. The reason is poor preparation.³

IX. Prospects of Nursing as a Vocation

A. The committee on the grading of nursing schools

1. U. S. Census Report, 1930, "Unemployment," Vol. I.

2. Ibid.

3. "How to Choose a Nursing School," Nursing Information Bureau of the American Nurses' Association, New York City, 1935.

recently found that 54% of nurses enter private duty; 19% public health work; 23% institutional duty; and 4% other allied work. Private duty nurses have been hit worse by unemployment than any other group during the last four years.¹

B. Urban communities are over-supplied with nurses.

There is more opportunity for nurses in rural areas than in the cities.²

C. Nursing is changing rapidly from simple bedside

care to a number of specialized fields such as

characterize any growing profession. The graduate

nurse should not turn to private duty work, for

there are sufficient nurses in that field to take

care of the peak loads of sickness. But she should

turn to public health work or psychiatric or mental

hygiene nursing. Other fields open are industrial

and Government nursing.³

D. The Secretary of the Arizona State Board of Nurse

Examiners believes that the new fields such as

dietetics, x-ray technicians, laboratory workers,

etc., offer the greatest field for the future nurse.

She also stresses the fact that nursing has only

room for the better class of nurse.

1. "Nursing," Guidance Leaflet #15, U. S. Dept. of Interior.

2. Ibid.

3. Eiegler, Frances, Dean of Nurses' Medical College of Virginia, Radio Address, "Nursing as a Vocation."

E. Another great advantage of nursing training is the value it will be to a girl if she marries and has a family.

F. "Nursing is taking its place among the professions. It is playing an important role in the work of the world. For these reasons we say to you, 'If you really want to be a nurse, prepare for your work carefully and build on a firm foundation.' There will be work for you to do that needs to be done."¹

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DOMESTIC AND PERSONAL SERVICE

BARBER

I. Classes of Barbers and Nature of Their Work

A. Barbering is a skilled trade which has strict regulations for training. In Arizona the State Board of Barbers' Examiners must pass on each applicant before he may barber. The barber has only his services to offer. He must build up a following to be successful. Some become specialists in certain divisions of the work as follows:

1. Hair specialists study the care of hair and the diseases of the scalp.
2. Skin specialists become experts in treating diseases and disorders of the skin.
3. Beauty parlor work includes marcelling, hair-waving, and similar work.

II. Working Conditions Surrounding Those Engaged in This Kind of Work.

A. Health and Accident

1. Stomach trouble caused by irregular hours for meals is a common ailment among barbers. When customers come in he has to serve them regardless of the hour. Many barbers die of stomach trouble.

B. Associates

1. If his shop is attractive and he renders a high grade of service, the better class of people will be attracted to his shop. This will give him an opportunity to make friends and acquaintances among them.

C. Chances for Advancement

1. Apprentice barber, journeyman, and manager are the regular steps.
2. Most depends upon the prospective barber's ability to meet the public and do good work quickly.

D. Hours of Work

1. In Arizona the winter is the best season.
2. Shops open six days per week from 8 A.M. to 6 P.M. and on Saturdays from 8 A.M. to 8 P.M.
3. The Union does not set a regular number of hours per week for workers.

III. Preparation

A. General Educational Requirements

1. Must be at least an eighth grade graduate.
2. Courses in school that will be of value are:
 - a. Chemistry
 - b. Physiology
 - c. Psychology
 - d. Anatomy
 - e. English

B. Regulations and Technical Requirements

1. State Laws¹

- a. Must have eighth grade education.
- b. Can't be a user of narcotics.
- c. Must stand a medical examination before a medical board and obtain a health certificate.
- d. The Barbers' examination is taken on:
 - 1) Study of anatomy from shoulders up.
 - 2) Bones, muscles, and blood circulation.
 - 3) Ability to recognize diseases that a patron might have.
 - 4) Knowledge of sterilization of equipment.
 - 5) Ability to do this type of work.

2. Barber Schools

- a. Most of these schools are located in Los Angeles and San Diego, California. There has been one located in Phoenix at certain times.
- b. All require students to have eighth grade education.
- c. The average course lasts six months.
- d. Tuition ranges from \$150-\$250 for the six month term. The student gets a small compensation as he progresses. He starts at nothing and after about two months he charges for his work; 5 cents for shaves and 10 cents for haircuts.

e. A number of barbers interviewed stated the following: "After you come out of a barbers' college you go to work in a shop and learn the barber business."

3. Labor Unions

a. Regulations¹

- 1) Age limited to 16 years.
- 2) No educational requirements but a high school education is given preference.
- 3) Must serve three years as an apprentice.
- 4) No set rules for removal.
- 5) Union dues in Arizona are \$2.00 monthly divided as follows:
 - a) International, 75¢
 - b) State Federation of Labor, 20¢
 - c) Central Trades Union, 10¢
 - d) Local, 95¢

C. Common Deficiencies of Present Workers

1. Many fail to keep up their personal appearances.
2. Many fail in not being able to meet the public educationally.
3. Many fail to observe the workmanship of other barbers and do not try to improve their methods.

IV. Remuneration

1. Constitution and Membership Book of the Journeymen Barbers of America.

A. Union

1. Apprentice receives \$1.50--\$2.00 per day.
2. Journeyman Barbers have several plans of wages.
 - a. 60 per cent goes to the employee and 40 per cent goes to the employer.
 - b. Receives 25 per cent on first \$37.50. Over that amount the barber receives 60 per cent. (This plan used in large shops).
 - c. \$40 per week is about the average in Arizona.
3. Master or Managers in large shops, receive a small per cent of all the other barbers' receipts.
4. Other Remunerations
 - a. Pensions, \$10 per week for 16 weeks each year for sick benefit.
 - b. Union will pay for burial according to the length of membership in the Union: 1 year, \$100; 3 years, \$250; 15 years, \$500.

B. Non-Union Shops

1. Apprentice may become a journeyman and receive his wage after six months.
2. Apprentice receives from \$5 to \$7 per week.¹
3. Journeymen barbers receive \$18 to \$40 per week.²

C. Average Income of All Engaged in That Work

1. Occupational Studies, Monograph Series No. 13, op. cit.
2. Ibid.

1. Wages range from \$3.50 to \$8.00 per day.
\$5.00 is the approximate average of all engaged in this work.¹
2. The approximate average for Arizona in 1929-1930 was \$40.00 per week.
3. The winter months in Arizona are the best at present with an approximate income to Union barbers of \$32.00 per week from September to June, 1934-1935.
4. The average for 1935 in Yuma for Union barbers is estimated at \$30.00 per week.
5. The income of a barber depends a good deal upon his personality and ability to good work fast.

V. Individual or Special Requirements

A. Mental

1. Must have a pleasing personality.
2. Should be able to converse intelligently with the average man.

B. Physical

1. Must above all be healthy.
2. Must be handy with equipment.

VI. Types of Tests That Should Help Determine if a Student is Qualified for This Work

A. Mechanical tests

B. Aptitude tests

1. Proctor, op. cit., p. 187.

VII. Means of Getting a Position

A. Union

1. Finish a barber school and apply to Secretary of the Barbers' Local in the town you wish to work in.
2. You will be placed on a waiting list and as soon as some shop has an opening you will be called, providing they are willing to take a "green" barber.

B. Other Means

1. Finish barber school and then apply at shops with a vacant chair for a trial.
2. Make friends with the owner and get him to help you along at the start.
3. Be willing to work for a small amount until you get experience and can build up a group of patrons of your own.

VIII. Supply and Demand

A. Arizona

1. Union

- a. There are about 400 union barbers in the State and about 30 of them in Yuma.
2. Over the State there are about 85 per cent of the union barbers steadily employed.
3. The Union is not taking in very many apprentice barbers at the present time. The Union is full.

B. United States

1. In 1930 there was a total of 374,290 barbers, hairdressers and manicurists. Of this number 261,096 were men and 113,194 were women.¹
2. Barbering business was given a decided boost when women started cutting their hair. As a result great numbers of women have trained to become barbers.

IX. Prospects in the Barber Trade

- A. There are good prospects for a man that is willing to really learn his trade and try and study his patrons.
- B. Each person has a certain peculiar way he wants his hair cut, his moustache trimmed, or his face steamed. If the barber can do this as he wishes each time, the patron will wait for him next time he comes into the shop.
- C. One who is not willing to serve should never try to be a barber. He must please the patron, not himself.
- D. The care of women's hair has broadened the barber's field. He may become a specialist in this line as well as carry on his regular men's trade.

I. Meyers, Little, and Robinson, op. cit., p.154.

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3. Proctor, William M.
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BEAUTY CULTURE

I. Description of Work and Working Conditions

A. Type of Work¹

1. A beauty operator does a variety of work, consisting of shampooing, facial treatments, marcelling, permanent waving, finger and water waving, scalp treatment, hair treatments, hair tinting and care of the skin.

1. "Beauty Culture as a Vocation," Occupational Studies No. 7, Division of Trade and Industrial Education, State Board of Education, Richmond, Virginia, 1933.

B. Surroundings

1. Most all shops have attractive, clean and comfortable surroundings. They must have pleasant conditions to attract patrons.
2. Many contacts are made with people of position and prestige in the community.

II. Requirements

A. Qualifications

1. Personal

- a. Must have a pleasing personality, an even temperament, and a gracious manner.
- b. Must like people and want to please and serve them.
- c. Must be well groomed and clean.

2. Physical

- a. Must have excellent health.
- b. Must have good eyesight.
- c. Must not be too large.

3. Educational

- a. Completion of a high school education is most desirable. Almost impossible to pass the State examinations without it.
- b. The operator with education and culture will attract persons of position, and it is the operator with a clientele of this type who is financially successful.

4. Technical

a. The Arizona State Board of Cosmetology examines all operators before they may enter the trade.

b. Requirements

1) Must have completed 1800 hours of training in a recognized school of cosmetology.

2) Must pass an examination on:

a) Study of anatomy from shoulders up.

b) Bones, muscles, and blood circulation.

c) Ability to recognize disease.

d) Knowledge of sterilization of equipment.

e) Ability to do the various types of work required.

3) To do barbering or hair cutting of any type the operator must have a barber's license.

c. Beauty schools or colleges in Arizona are located in Tucson and Phoenix. Many large schools are found in Los Angeles and San Diego.

III. Compensation

A. Salary

1. The usual method of payment is to receive a set amount per week, and then a percentage or com-

mission is also paid each operator on the basis of her individual receipts.

IV. Prospects of Beauty Culture as a Vocation

- A. Most shops in Arizona are operated by the owner. They employ one or two operators.
- B. As an operator builds up a clientele she may then open up a shop of her own.
- C. There is an advantage in this occupation in that the trained worker can usually obtain employment, since this vocation is generally classified as a universal occupation.¹
- D. There are good prospects for a girl who gets an education, then learns her trade in a first-class school. She should be able to open up a shop of her own after two to three years of experience as an operator.

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McGraw-Hill Book Co., New York, 1934.
4. Proctor, William M.
Vocations
Houghton Mifflin Co., Boston, 1929.

CLERICAL WORK

STENOGRAPHER

I. Classes of Stenographers and Nature of Their Work

- A. Typist.---The typist does general typewriting, incidental clerical work and filing.
- B. Transcribing machine operator.---This work consists of transcribing various dictated work that has been recorded on dictagraphs or other similar machines.
- C. Stenographer.---The stenographer takes dictation in shorthand and later transcribes the notes with the typewriter. In many offices the work will also include general office work, such as opening and sorting mail, filing letters and documents, answering the telephone to give and receive information and messages, and receiving visitors who call to see the employer. In smaller offices the work of keeping books often falls on the stenographer.¹
- D. Private Secretary.---The private secretary handles the confidential correspondence of the head of a department or an official; meets and interviews visitors, prepares office reports, collects and interprets information for executive action, and

1. Meyers, Little and Robinson, op. cit., pp. 167-169.

performs other incidental clerical work of the office.

E. Executive Secretary.---The work of the executive secretary consists of secretarial duties involving executive and departmental correspondence and detailed administrative work in carrying out the orders and policies outlined by executives.

F. Court Reporters.---Their work is specialization in legal dictation which they later transcribe with the typewriter.¹

II. Working Conditions Surrounding Those Engaged in This Occupation.

A. Health and Accident

1. As this work is quite sedentary, it will be necessary for one in this occupation to find outside activities and exercise to keep in good health.
2. The average life expectancy for bookkeepers and office workers is 36.5 years, while that of a farmer is 58.5 years.¹ This is the result of the sedentary inside type of work the clerical worker engages in.
3. Working conditions are nearly always favorable to health, as most offices are clean, well

1. Bulletin No. 207, Series 11, U. S. Department of Labor.

lighted, and well ventilated.¹

4. Accidents are of no consequence.

B. Associates

1. The worker is generally in contact with progressive people and thus has the opportunity to learn about the latest business methods and to gain further preparation for promotion.

2. Stenographers of ability are more likely to be noticed by executives than others in the industry because they are closely associated with them.

C. Chances for Advancement²

1. Close association with executives puts a good stenographer in line for an executive office. This personal acquaintance often leads to a more rapid promotion than comes to an ordinary office worker.

2. Stenographers may expect to develop into head-stenographers, court reporters, or secretaries. The promotion will be according to seniority and the ability of the stenographer.

3. The stenographer that uses her head and proves of value to her employer will be the one that will advance.

D. Seasons and Hours of Work

1. Meyers, Little and Robinson, op. cit., p. 171.
2. Procter, op. cit., p. 205.

1. Stenographic work is not seasonal. Most all jobs give year round employment.
2. The forty-four hours of work per week is the average, although some work forty-eight hours.
3. This type of work is not hard work but often proves monotonous because of repetition of routine duties, day after day.¹

III. Preparation

A. General Educational Requirements

1. There is no set requirement for a stenographer. Many finish only the eighth grade and attend business school for three to six months. Their future is very limited unless they study and obtain additional education.
2. A high school education is the training that most stenographers have, with a short business course after graduation.
3. Many high schools today offer commercial training for students during their junior and senior year that will fit them to fill the average position of stenographer.
4. High school subjects of particular value are
 - a. English
 - b. Penmanship and spelling
 - c. Typewriting

1. Proctor, op. cit., p. 205.

- d. Stenography
- e. Economics
- f. Bookkeeping
- g. Business arithmetic
- h. General mathematics
- i. Commercial geography
- j. Commercial law

B. Regulations and Technical Requirements

1. The Civil Service entrance requirements set ninety-six words as a minimum for junior stenographers and 120 words as a minimum for senior stenographers.
2. Court reporters must excel in stenography and knowledge of legal terms. Oftentimes he has to take as high as 200 words per minute.
3. Typing requirements of about sixty words per minute will meet the average need.
4. Stenographers must know punctuation, spelling, sentence structure and paragraphing.
5. They must also be able to frame a well balanced letter. Many sales are made or lost just on the form of the letter sent out of an office. That is why the stenographer's part in business is so important.

1. "Salaries for Routine Clerical Work in Private Industry," Personnel Classification Board, U. S. Government Printing Office, Washington, D. C., 1931.

6. Special requirements and preparation

- a. Age.---Stenographers enter the work from seventeen to twenty-one, private secretaries eighteen to twenty-four inclusive. The well trained young woman will usually get the job over an older woman when vacancies are to be filled.
- b. Education.---Many employers require high school education for stenographers and from two years to college graduation for private secretaries. It is only those with higher education that will be able to fill executive positions when an opportunity occurs.
- c. Experience.---Most students that have completed the two years' work in commercial subjects given by the average high school can go into an office and fill the job well enough to get by until they learn the forms, methods and ways of doing things of that particular office. It is experience that makes the stenographer of value to her employer.

C. Common Deficiencies of Present Workers

1. Lack of background education in subjects other than commercial.
2. Lack of tact and understanding in dealing with people.

3. Lack of initiative, doing only what they are told to do.
4. Many fail to master the essentials of good English and continue to use poor grammar, poor sentence structure, incorrect letter writing forms, and inaccurate spelling.

IV. Compensations

A. Salaries of Various Grades

1. Typist and Stenographer

- a. Beginners in this type of work usually start at a salary of \$12 to \$15 per week.
- b. The average salary of typists and stenographers in Yuma County is estimated to be between \$90 and \$110 per month. The average for normal times is \$1,048 per year and for stenographers the average is \$1,341 per year.
- c. Stenographers start at the University of Arizona at salaries ranging from \$60 to \$90 per month, depending upon their training and ability.
- d. Junior stenographers under Civil Service start at \$1,600 per year. Senior stenographers receive \$1,800 per year.

2. Secretarial work

- a. The general average for this work is higher

than that for stenographers. Proctor gives the range for secretaries as \$100 to \$300 per month.¹ Edmonson and Dondineau list \$125 to \$400 as the possible range.²

b. The salary of a secretary depends largely on the business she is engaged in and the service she can render to her employer.

c. Confidential secretaries often receive as high as \$10,000 per year salary.

3. Court reporters

a. They receive \$10 per day and from ten to twenty cents per hundred words for making transcripts of testimony. Some are on a yearly salary ranging from \$2000 to \$4000.

B. Pensions

1. Under Civil Service and in various large companies there are provisions made for pensions.

V. Individual or Special Requirements

A. Personal

1. A superior stenographer must be intelligent, mentally alert, and possessing a good memory. She should also be neat, accurate, trustworthy, tactful, and courteous. She must have good judgment, initiative and resourcefulness.

1. Proctor, *op. cit.*, p. 204.

2. Edmonson and Dondineau, *op. cit.*, pp. 177-178.

B. Physical

1. Must have the use of both hands, good eyesight, and accurate hearing.
2. Must have a pleasing personal appearance. Must be neat about herself and her clothes.
3. Must be fast at her work.

VI. Types of Tests That Should Help to Determine if a Student is Qualified for This Work.

A. Teachers' Reports

1. The grades and reports in commercial subjects should give some light as to the student's possibilities in this field.
2. Many times typing teachers are asked to make recommendations for certain openings.

B. Trade Tests

1. The following points are considered in one trade test for commercial workers.¹
 - a. Filling out application blanks.
 - b. Letter writing in response to advertisements.
 - c. Tests in fundamentals: reading, writing and arithmetic.
 - d. Penmanship tests.
 - e. Questions and answers.
 - f. Educational tests.

1. Cohen, op. cit., p. 162.

g. Time element is very important in all these tests.

VII. Means of Getting a Position

A. Where to Apply

1. It would be wise for a student to apply to companies or concerns using stenographers six months before graduation. The student should tell when she expects to graduate and what type of work she will be prepared to do.
2. One shouldn't be afraid to apply, even if there appear to be no openings at the present time. An opening may arise at any time, and an applicant with a previous contact is ahead of the rest.
3. Make friends with those engaged in this type of work. Many times they will know of openings and can give valuable recommendations.

VIII. Supply and Demand

A. This type of work seems to be taken over almost entirely by women. The male stenographer has almost disappeared. The 1930 Census lists 36,050 males as against 775,140 women engaged as stenographers and typists. The number of males in this occupation decreased by 5.5 per cent between 1910 and 1930, but from 1920 to 1930 there appears to be about a 7 per cent increase in the number of

males.

- B. It is estimated by the Office of Education that 500,000 young people are taking stenographic courses this year in public schools and that another 200,000 are being trained in private business schools. (1935-36)
- C. The number engaged in typing and stenography in 1910 was 320,000. In 1930 the number had risen to 811,190.¹
- D. The clerical occupations give work to five per cent of those gainfully employed in the United States, a total of 4,025,324.²
- E. The demand for clerical workers seems to continue to gain. Girls are inclined to think of clerical work as one of the few kinds of work open to them and enter it without considering whether or not this is the work they can do best.³
- F. In Yuma High School a good percentage of those graduating in commercial work and having good records have been placed in local institutions and business houses.

IX. Prospects of Stenography as a Vocation

- A. The importance of this work has increased almost 300 per cent in the last twenty years. There is

1. Fifteenth U. S. Census, U. S. Bureau of Census, 1930.
2. Meyers, Little and Robinson, op. cit., p. 164.
3. Ibid.

every reason to believe that this increase will continue in the future.

- B. The business training a person receives in this type of work will prove of great value to anyone going into other types of work.
- C. Many opportunities are open for the competent and ambitious stenographer to advance to a more responsible position.
- D. Frank Vanderlip, who began as a stenographer, became president of one of the richest banks in America.¹
- E. Boys may think that clerical work is for girls, since so many girls are engaged in it. But there is a good demand for capable and ambitious boys in the occupation. Many court reporters are men. The position of stenographer is often the entering wedge into an organization, which otherwise a young man might not be able to enter.²
- F. All girls should not think of clerical work as the only field open to them. If the student does not possess the qualifications needed for a stenographer, she should enter a more suitable field.

1. Meyers, Little and Robinson, op. cit., p. 164.

2. Ibid.

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PART III

GUIDANCE WORKBOOK

by

Ralph M. Young
Yuma Union High School
Yuma, Arizona

1936

TO THE STUDENT

Purpose of the Workbook

No one can tell you exactly what you should do to be successful in life. The best that can be done is to give you a clear and comprehensive understanding of the problems involved in choosing a vocation, thus increasing your chance of achieving security, prosperity, and happiness. This workbook has been prepared to help you find yourself in your high school work, in the choice of a possible future school, and in your choice of a vocation which you might make your life's work.

This workbook is divided into three parts. Part I deals with general introductory considerations. Part II contains a survey of vocations important in the Southwest. Part III is an outline for an intensive study of an occupation which you are considering as a possible life's work.

This Workbook Should be Used with the Following
Suggestions in Mind:

1. Read through the work assigned. When there are references given read through all if possible before you decide on your answers.
2. If you can find a reference that is not referred to in the workbook, write the name of the book and page reference in below the regular references.
3. Read carefully. Be sure you understand what each problem asks you to find.
4. Don't limit your sources of information to written material. Much of your best information will be obtained from interviews and talks with people in the field.
5. Use the blank pages given throughout the book at the suggestion of the instructor. Use the blank sides of your other pages for occupational clippings and pictures taken from newspapers, magazines, etc. Try to tie up this material with the material in your workbook.

Sources of Information at Your Disposal

1. Library, school and city.
2. Newspapers and magazines.
3. College catalogs and bulletins.
4. Interviews with workers engaged in the various occupations.
5. Interviews with community leaders.
6. Talks and discussions with your parents and friends.

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PART ONE

MY AIMS WHILE IN ----- HIGH SCHOOL

- I. To take advantage of all the educational opportunities offered in ----- High School.
- II. To realize that the best time to get a high school education is now, and that, if I do not secure it now, I may never get it.
- III. To acquaint myself with the purpose and value of a high school and help myself to acquire correct habits of study.
- IV. To gain information about colleges and universities so that I can make my choice of schools.
- V. To try to realize my weaknesses and strive to do better.
- VI. To take advantage of my strong points and use them to good advantage.
- VII. To learn the factors one should consider before choosing a vocation.
- VIII. To see the relation of school courses to preparation for life outside the school.
- IX. To realize that I must prepare myself to fill a useful position in life after I leave high school.
- X. To fit myself through education to meet life situations and become a good, happy, and useful citizen.

The following six groups of characteristics will largely determine the success of your vocational life.

- I. Character-integrity, responsibility, resourcefulness, initiative.
- II. Judgment-common sense, scientific attitude, perspective.
- III. Efficiency, thoroughness, accuracy, industry.
- IV. Understanding of men, executive ability.
- V. Knowledge of the fundamentals of your vocation.
- VI. Technique of practice and of business.

GENERAL SUGGESTIONS ON HOW TO STUDY

I. TYPES OF STUDYING

- A. Reading type; social science, literature, etc.
- B. Laboratory type; working with apparatus.
- C. Analytical or reasoning type; mathematics, theory.

II. GENERAL PROBLEMS COMMON TO ALL LEARNING

A. Control of Attention.

1. This is the chief source of waste, the reluctance to start work. (I hate to do this.)
To overcome this:
 - a. Force yourself to work.
 - b. Put yourself in a bodily position for work. (Sit up.)
 - c. Work where there is no distraction. (Get away from the family.)
 - d. Begin work. Do not sit and hate to begin. Get started.

B. Assimilation and retention of material and suggestions for memory work.

1. Know what you want to find. Ask questions and answer them.
2. Understand what you want to assimilate. Retain or memorize understandingly, not blindly.
3. Organize ideas with certain reference to larger ideas and general principles.
4. Recall at brief intervals essential ideas of what you have read. Stop and say to yourself, "What did I read? What is it about?"
5. Use the ideas, tell them to somebody; connect them with something you already know.
6. In committing material to memory, learn by wholes, not by parts. Reasons why this is better:
 - a. Retention is more permanent.
 - b. Eliminates many useless and interfering connections and prevents stalling between piecemeals.
 - c. Reading or learning as a whole gives a view of the entire skeleton and serves to correlate all parts and to give meaning to the several parts as well as to the whole.
 - d. Memorizing in parts produces unevenness. Repeating first part many times causes

overlearning while the last part is covered just enough to get by. This type of learning is discouraging to students, for they cannot see or note progress.

- C. Improving your reading ability.
 - 1. Force yourself to read faster.
One-fourth of university students read slower than average high school students. One-fourth of sixth grade students read slower than fifth grade students. Most people can increase reading and comprehending speed fifty to one hundred per cent through habit and concentration.
 - 2. Read by groups of words. Do not read word by word. Increase your eye-span.
 - 3. Do not move your lips in silent reading.

III. DEFINITE RULES FOR STUDY

- A. Keep in good physical condition.
- B. See that external conditions are favorable; light, heat, chair, clothing, ventilation, etc.
- C. Form a time and place study habit.
- D. Begin work promptly. Take on attitude of attention.
- E. Concentrate: work intensely while working.
- F. Do not fluster or worry.
- G. Do work with intent to learn and remember, do not merely cram.
- H. Do work with an aim. Make rapid survey of assignment material.
- I. Take a rapid review of last lesson.
- J. Give most time to your weakest points. Carry study past the point of just recall.
- K. When information is of importance for the time being only, pass over it rapidly.
- L. Make duration of study long enough to warrant "warming up".
- M. When you stop or interrupt work, stop at a natural break. Leave a cue for a start.
- N. After intense application on something, pause and re-read before taking up something else.
- O. Work out your own examples and general principles. State them in your work.
- P. Mentally review ever so often as you study.
- Q. Do not hesitate to mark books to make important points stand out.
- R. To master extensive and complex work, make an outline.

- S. Do not just memorize, but understand your work.
- T. Do not break up a poem or prose, but memorize as a whole.
- U. Summarize, preferably in writing.

IV. LIST FIVE THINGS YOU COULD DO TO IMPROVE YOUR OWN STUDY HABITS.

A.

B.

C.

D.

E.

V. WRITE A BRIEF CODE OF ETHICS FOR HIGH SCHOOL STUDENTS

FACTORS TO CONSIDER IN CHOOSING A COLLEGE OR UNIVERSITY

I. SHOULD EVERYONE GO TO COLLEGE?

A. List five reasons for attending college

1.

2.

3.

4.

5.

B. List five reasons for not attending college

1.

2.

3.

4.

5.

**II. SOME OF THE FACTORS I MUST CONSIDER IN CHOOSING
AS MY COLLEGE OR UNIVERSITY**

A. Location

1. Chance for work

2. Chance for development

3. Convenience

a. Distance

b. Means of travel to and fro

c. Traveling expenses

B. Entrance Requirements

1. Age

2. Examinations

3. Required subjects for college entrance

- a.
- b.
- c.
- d.
- e.

C. Electives of value to my vocation which I will have completed in high school

- 1.
- 2.
- 3.
- 4.
- 5.

D. Courses I will have to take in college

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

E. Rank of College or University

1. Endowment
2. Equipment
3. Faculty
4. Standards
5. Eminence in the field where your interests lie.

6. Extra-curricular activities

a.

b.

c.

d.

e.

7. Positions held by alumni

a.

b.

c.

d.

F. Costs

1. Tuition

2. Fees

3. Room and board

a.

b.

4. Books

5. Scholarships available

6. Miscellaneous

PREPARING FOR YOUR OCCUPATION

I. FACTORS TO CONSIDER BEFORE CHOOSING A VOCATION

- A. How much education do I need?
- B. Should my education be general, technical, or special?
- C. What is the beginning salary, and what can I expect later?
- D. Number of people engaged in that kind of work, the importance of this activity.
- E. Supply of and demand for workers in that kind of work.
- F. Working conditions surrounding those engaged in that kind of work.
- G. Permanence and regularity of employment.
- H. Is there a possibility of advancement in the field or is it a blind alley job?
- I. Am I fitted for this kind of work?
- J. Does the occupation have value to the community? Is it of service to the general welfare of society, as well as to myself?

II. THE 1930 CENSUS CLASSIFICATION OF OCCUPATIONS IS AS FOLLOWS:

- A. Agriculture.
- B. Forestry and fishing.
- C. Extraction of minerals.
- D. Manufacturing and mechanical industries.
- E. Transportation and communication.
- F. Trade.
- G. Public service.
- H. Professional service.
- I. Domestic and personal service.
- J. Clerical occupations.

The whole number of occupations is divided into 25,000 occupational jobs or designations as they are termed in the census report.

III. MAKE A LIST OF 20 OCCUPATIONAL JOBS IN OUR COMMUNITY THAT YOU MIGHT ENTER.

- | | |
|----|----|
| A. | F. |
| B. | G. |
| C. | H. |
| D. | I. |
| E. | J. |

K.
L.
M.
N.
O.

P.
Q.
R.
S.
T.

IV. THE FOLLOWING CLASSES OF WORKERS ARE FOUND WITHIN EACH OF THE 1930 CLASSIFIED OCCUPATIONAL GROUPS:

A. Unskilled Workers

1. The largest group
2. They do only what someone tells them to do.
3. They receive from \$1-\$6 per day.
4. List 10 jobs of this class.

- | | |
|----|----|
| a. | f. |
| b. | g. |
| c. | h. |
| d. | i. |
| e. | j. |

5. Education required

6. Future

B. Semi-skilled

1. Most semi-skilled workers were first unskilled workers.
2. They are able to handle machinery, read directions, etc.
3. They receive from \$3-\$10 per day.
4. List 10 jobs of this class of work.

- | | |
|----|----|
| a. | f. |
| b. | g. |
| c. | h. |
| d. | i. |
| e. | j. |

5. Education required

6. Future

C. Skilled Workers

1. Made up of two classes.
 - a. Men and women who have acquired their technical training in high school or a trade school.
 - b. Men and women who have been unskilled or semi-skilled workmen, but by conscientious efforts and good habits of work have trained themselves to be skilled workers.
2. The majority of workmen in the building trades, machine shops, telephone offices, etc., are of this class.
3. They receive better pay than unskilled or semi-skilled.
4. List 10 jobs of this class.

a.	f.
b.	g.
c.	h.
d.	i.
e.	j.
5. Education required
6. Future in this work

D. Clerical Workers

1. Workers of this group are found in nearly all of the occupations. They are often spoken of as the "white collar" group.
2. Usually high school graduates with special training.
3. They are found in public and private offices.
4. List 10 clerical positions.

a.	f.
b.	g.
c.	h.
d.	i.
e.	j.
5. Education

6. Future

E. Business Careers

1. People who take business risks in order to make greater profits than they can make working for wages, salaries, or professional fees.
2. They may make great profits when successful, but may lose all when they fail.
3. They must have capital (also land and labor) to work with.
4. List 10 kinds of businesses.

- | | |
|----|----|
| a. | f. |
| b. | g. |
| c. | h. |
| d. | i. |
| e. | j. |

5. Education

6. Future

F. Professional Pursuits

1. Number less than any other group.
2. More education and longer training period necessary to prepare for the professions than any other work. Eight years after high school in many cases.
3. They receive a more regular income than any other group of workers.
4. List 10 professions.

- | | |
|----|----|
| a. | f. |
| b. | g. |
| c. | h. |
| d. | i. |
| e. | j. |

5. Education required.

6. Future in this work.

V. SELECT SOME LARGE BUSINESS AND SHOW HOW EACH OF THESE WORKERS IS ENGAGED IN THE SAME GENERAL OCCUPATION.

PART TWO

AGRICULTURE

"The farmer must realize the complexity of the agricultural situation. He must realize that agriculture is part of the whole social, economic, and financial order, that it cannot be treated wholly apart from business, banking, and labor. In the main he must pin faith to research, cooperation, organization and education."---Glenn Frank.

The people who gain their living from agriculture in the United States number 10,241,000.

I. State the chief advantages and disadvantages of farm life.

Advantages

Disadvantages

II. Write some of the reasons for the inadequate income of the farmer.

III. Advantages a _____ County farmer has.

IV. Enumerate the qualities needed to be a successful farmer.

V. List four things the farmer might do to improve his living conditions.

1. 3.

2. 4.

- VI. Find out the five leading agricultural products of our community. List products and value of each.
- VII. What courses in high school are of particular value to a prospective farmer?
- VIII. How can a college education help to make a boy a better farmer?
- IX. The United States government and the state government do many things to help the farmer because he is so important. What are some of these things?

References

Edmonson and Dondineau--Chapter III.
Gallagher--Lessons 48, 49.
Meyers, Little and Robinson--Part I, Unit VII.
Prector--Chapters IV, V.

Suggestions

Interview County Agent.
Interview Farmers' Cooperative Officials.

FORESTRY AND FISHING

- I. Occupational jobs available in forestry.

- II. Reasons for the importance of forestry at the present time.

- III. Agencies working toward reforestation.

- IV. Importance of fishing as an industry.

- V. By-products of fishing.
 - a.
 - b.
 - c.
 - d.

- VI. Other products from the ocean.

References

- Edmonson and Dondineau--Chapter III.
- Gallagher--Lessons 50 and 53.
- Meyers, Little and Robinson--Part I, Unit VII.
- Procter--Chapter V.
- Careers Pamphlet "Forestry."

Suggestions

EXTRACTION OF MINERALS

I. Enumerate some of the positions open in mining.

II. Give the advantages and disadvantages of working in mines.

III. List leading mineral products of Arizona and production of each.

- | | |
|----|----|
| a. | d. |
| b. | e. |
| c. | f. |

IV. Future of mining in Arizona.

V. List eight mining towns of Arizona.

VI. Rank Arizona in Total United States production according to value:

- | | |
|-------------|-------------|
| a. Silver | d. Gold |
| b. Lead | e. Copper |
| c. Asbestos | f. Vanadium |

References

World Almanac--1936.
Arizona Yearbook--1930.
Meyer, Little and Robinson--Unit VIII.
Proctor--Chapter VIII.
Edmonson--Chapter IV.

Suggestions

Talks with Mining Men.

FACTORY WORK AND METAL TRADES

Ten million people in the United States employed in these industries.

- I. List advantages and disadvantages of factory work.
- | <u>Advantages</u> | <u>Disadvantages</u> |
|-------------------|----------------------|
|-------------------|----------------------|

- II. List some of the ways in which invention of modern machinery has affected the workmen in factories.

- III. Name some of the kinds of factory work you could enter.

- IV. List the six most important manufacturing industries in the United States.

- | | |
|----|----|
| a. | d. |
| b. | e. |
| c. | f. |

- V. Why is _____ (your community) not suitable for manufacturing?

References

Meyers, Little and Robinson--Part I, Unit IX.
Edmonson and Dondineau--Chapter V.
Proctor--Chapters IX, X.
Gallagher--Group III.
World Almanac--1936.

Suggestions

TRANSPORTATION AND COMMUNICATION

More than three million people are engaged in transporting goods and persons from one place to another by rail, road, water, and air.

- I. Make a list of as many kinds of transportation and communication as possible.

Transportation

Communication

- II. Are transportation vocations hazardous compared with other occupations? Why?

- III. State the outstanding qualities required of a telephone operator.

a.

b.

c.

d.

- IV. Compare the advantages of truck transportation with those of railway to the shipper.

Advantages of truck transportation Advantages of railway

- V. Name the advantages and disadvantages of becoming an aviator.

Advantages

Disadvantages

VI. What are some of the Air Commerce Regulations, as issued by the United States Department of Commerce?

VII. Name six workers between the airplane designer and the pilot who must have specialized knowledge of aeronautics.

VIII. What are the types of work in which one might engage, in bus and truck transportation occupations?

IX. Why are there so few jobs available for young men in railroad transportation?

References

Edmonson and Dondineau--Chapter VI.
Callagher--Lessons 52-55.
Meyer, Little and Robinson--Part I, Unit X.
Proctor--Chapters VI, VII.

Suggestions

Interview telephone officials.
Interview railroad workers.

THE BUILDING TRADES

The building trades call for an expression of a large amount of physical activity. A high degree of skill in the arm, hand and finger movements is essential; good health, strong, robust bodies are necessary for most of the work.

I. List five occupations classified in the building trades. Give wages of each in _____ County at present time.

a.

b.

c.

d.

e.

II. List the advantages and disadvantages of working in the building trades. Select two trades and compare each.

Advantages

Disadvantages

III. List some of the things an electrician must know.

IV. List some of the things a plumber should know.

V. List some of the things a mason must know.

VI. List some of the things a carpenter must know.

VII. List some of the things a contractor must know.

VIII. List some of the work in the building trades a woman might do.

References

Callagher--Lessons 39-47 inclusive.
Meyers, Little and Robinson--Unit XI.
Proctor--Chapter XII.

Suggestions

Contact local Union officials.
Interview contractors.

VI. Give some of the advantages and disadvantages of government ownership of railroads.

Advantages

Disadvantages

VII. List advantages and disadvantages of public ownership of local utilities.

Advantages

Disadvantages

VIII. Find out about some publicly owned utility in regard to its efficiency, service rendered, etc. Record your findings.

IX. List six enterprises that the public might own and operate.

References

Edmonson and Dondineau--Chapter VIII.

Gallagher--Lessons 73-76.

Hughes--Problems of American Democracy, Chapter XII.

Meyers, Little and Robinson--Chapter VII.

Suggestions

Interview government employees.

Interview county officers.

PROFESSIONS AND ALLIED OCCUPATIONS

The most significant characteristic of a profession is that it is pursued to promote the welfare of others.

I. Name six professions with which you are familiar.

- | | |
|----|----|
| a. | d. |
| b. | e. |
| c. | f. |

II. Write the general drawbacks in the musical professions.

III. Many physicians are unsuccessful for the following reasons:

IV. List some of the services of the ministry outside the church.

V. List the outstanding characteristic of lawyers that meet with the greatest success.

VI. List the qualities one should have in order to be a successful coach or athletic director.

a.

b.

c.

d.

VII. Name the chief requirements for a good nurse.

VIII. List the chief duties of a civil engineer.

IX. Give the common cause for failures among teachers.

X. List qualifications one should have to make a good teacher.

XI. Legal qualifications for teachers in Arizona.

References

Meyers, Little and Robinson, Chapter XIII.

Edmonson and Dondineau--Chapter IX.

Procter--Chapters XVII-XXIV inclusive.

Gallagher--Lessons 57-59 inclusive and 77-91 inclusive.

State regulations or laws.

Suggestions

Interview teachers.

Interview professional men.

CLERICAL WORK

- I. State the duties of an accountant.
- II. Write the requirements of a good stenographer.
- III. Why is clerical work a desirable field for girls?
- IV. List the qualities necessary for success as a private secretary.
- V. Give some of the attractive and unattractive features of office work.

<u>Attractive</u>	<u>Unattractive</u>
-------------------	---------------------
- VI. Name some mechanical time-saving devices used in a large, modern business office.
- VII. Why does most clerical work pay less than factory jobs?

References

Edmonson and Dondineau--Chapter X.
Callagher--Lessons 60-72 inclusive.
Meyers, Little and Robinson--Chapter XV.
Proctor--Chapter XIV.

Suggestions

Interview commercial teachers
Interview clerical workers.

PART THREE

STUDY OF _____ AS YOUR LIFE VOCATION

A. Introduction

1. Occupations that appealed to me as a child.
2. Occupations that appeal to me now.
3. Why I chose this occupation to investigate.

B. A Brief History of _____.

1. Conditions among ancient people.
2. Conditions in America a century ago.
3. Conditions today.

C. Opportunities in the Field of _____.

1. Describe several branches of work in separate paragraphs, telling of duties in each case.

D. Duties that one would perform during a typical day. (Get information from talks and interviews.)

E. Preparation and training necessary.

1. Kind of training and amount required.

2. Courses in high school that will be of value.

- | | |
|----|----|
| a. | f. |
| b. | g. |
| c. | h. |
| d. | i. |
| e. | j. |

3. Advanced training

a. Points to consider in choice of schools

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)

b. Length of training

c. Cost of training

1) Per year.

2) Total cost.

d. Entrance requirements

- | | |
|----|----|
| 1) | 4) |
| 2) | 5) |
| 3) | 6) |

e. Subjects I will have to take in college.

- | | |
|----|----|
| 1) | 5) |
| 2) | 6) |
| 3) | 7) |
| 4) | 8) |

f. Training one can receive in our own community.

II. Economic Conditions

A. Opportunities for employment.

1. Importance of work in 1910.

2. Importance of work in 1930.

3. Future.

B. Steadiness of the work

C. Hours

1. Hours in working day

a. Time off.

b. Evening or night.

c. Sunday work.

d. Saturday afternoon.

D. Vacation

1. How much vacation.

2. What time of year.

3. With or without pay.

E. Remuneration

1. Money return
2. Salary of beginners
3. Average salary
4. Maximum salary
5. Satisfaction in the work itself

6. Personal interest in the work
7. Service to others

F. Conditions of work

1. Healthfulness of the work

2. Benefits provided for workers

G. Advantages and disadvantages

1. Chances for promotion

2. Can anyone find work in this field

3. Associates

4. Rating of this occupation in the community

III. Noted men and women in the field of _____.
(Write a brief biography of the life of at least three individuals.)

III. (Continued)

IV. Qualities a _____ should possess.

A. Physical qualities

- 1.
- 2.
- 3.
- 4.

B. Personal qualities

- 1.
- 2.
- 3.
- 4.
- 5.

C. Mental qualities, or those which make one an efficient worker.

- 1.
- 2.
- 3.
- 4.

D. Moral qualities, or qualities of character which are the foundation of permanent success.

E. Discuss each quality that is outstanding connected with this occupation.

V. Self analysis

A. Qualities which I possess

B. Qualities which I must cultivate

(Consult your family, your chums, your teachers, and persons engaged in the work about the qualities you have or lack that are necessary for success in this field.)

VI. Why I believe I will be successful as a _____.

VI. Some of the definitions given for success are:

VII. Give the advantages and disadvantages of working on a salary.

Advantages

Disadvantages

VIII. List some of the principles a beginner should bear in mind which not only will help him to hold his position, but to grow and develop in it.

References

Meyer, Little and Robinson--Part IV, Units XI-XV inc.
Edmonson and Dondineau--Chapter XI.
Proctor--Chapter XXV.
Gallagher--Lesson 100.

Suggestions

Interview several successful business men.
Interview several professional men.

THRIFT

"The easiest thing in the world is to spend money; anyone can do it. To spend wisely is not so easy; it requires thought and careful planning. To create a reserve for future spending requires vision, strength of character, and determination to get ahead."--WILLIAM A. SCHNEDLER.

I. State the chief purposes of keeping a budget.

II. Enumerate the essential points to consider in investing.

III. The amount of a child's allowance should be determined by his:

a. Age

b.

c.

IV. Give the advantages and disadvantages of credit.

Advantages

Disadvantages

V. Give the advantages of life insurance.

VI. Ways of investing personal savings.

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Edmenson and Dondineau--Chapter XII.

Gallagher--Lesson 34.

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Suggestions

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