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A SURVEY TO DETERMINE THE NEED FOR A
CAREER GUIDANCE HANDBOOK

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A SURVEY TO DETERMINE THE NEED FOR

A CAREER GUIDANCE HANDBOOK

A Field Study Project

Presented to

the Graduate Council of

Austin Peay State University

In Partial Fulfillment

of the Requirements for the Degree

Education Specialist

by

Robert Glenn Moorhead

August 1978

To the Graduate Council:

I am submitting herewith a Field Study written by Robert Glenn Moorhead entitled "A Determination for the Ultimate Need of a High School Handbook of Educational Career Plans for the Clarksville-Montgomery County School System." I recommend that it be accepted in partial fulfillment of the requirements for the Education Specialist degree with a major in Administration and Supervision.

Donald B. Lambert
Major Professor

We have read this research study and recommend its acceptance:

Allen F. Williams
Second Committee Member

Bryan Crutcher
Third Committee Member

Accepted for the
Graduate Council:

William H. Eells
Dean of the Graduate School

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CHAPTER 1

INTRODUCTION

In this age of increasing societal complexity, realistic career counseling is a necessity if high school students are expected to establish intelligent career goals and to make realistic educational choices based on these goals. Recently, there has been a growing concern about the public school and its role of preparing the youth of America for a satisfying and productive life.

The purpose of the educational programs of Tennessee, as purported by the Tennessee State Board of Education Rules, Regulations and Minimum Standards, is to provide the child and adult opportunities for intellectual development commensurate with their abilities.

Historically, there have been two philosophies on curriculum and the intellectual development of students in the United States: (1) the traditional general education curriculum with a primary emphasis on the languages and mathematics, and (2) the vocational curriculum with its skill or trade development projects.

The reformers at the turn of the century, under the leadership of John Dewey, sought to make the schools more responsive to the needs of the individual and more effective in realizing the goals of a democratic society.

The theoretical and practical aspects of learning were mutually reinforcing. This theory was supported by John Dewey when in 1914 he stated, "A democratic education requires no separation of vocational training from academic training" (Ginsberg, 1971). Some schools in the United States today follow Dewey's mutually reinforcing philosophy.

A certain percent of all high schools in the United States today could probably be called comprehensive because of their curricula, which contain some vocational educational programs. Yet, undoubtedly, only a small amount of the schools are conforming to the basic criteria of providing educational opportunities for all types of youth.

The American student is expected to choose a course of study from a variety of curriculum offerings, with only a ratio of his or her program devoted to mandated subjects. This is the elective system, and the elective subjects are the basis of division between liberal and vocational educations.

Based upon the results and feasibility of this study, the writer proposes to devise and implement a "High School Handbook of Educational Career Plans for the Clarksville-Montgomery County School System", which will formulate specific, workable instructional objectives in order to individualize and assist each secondary student in realizing his or her potential either by an academic education or vocational education. Such a requirement will, in

addition, necessitate each student to accept more of the responsibility in his process of learning.

The eventual implementation of a "High School Handbook of Educational Career Plans for the Clarksville-Montgomery County School System" will provide equal opportunities for any student to plan and select his academic subjects commensurate with his chosen career. This will enable each student to enter a vocation or profession upon graduation from high school or some other higher educational facility. In addition, such a publication of career information will eliminate the present inefficient method of duplication of information-gathering activities by guidance counselors and thus allow them additional hours for individualized counseling.

Statement of the Problem

There has been a growing concern about public schools and their role of preparing the youth of America for satisfying and productive life. High unemployment among youths, large number of school dropouts, and the myth of a college degree are some of the reasons for this concern.

The success of education in the United States is best measured by the individual fulfillment that it brings to the lives of those who are the products of our schools and colleges. Educators see an evident need to improve substantially educational performance, and as this need arises, the educator's ability must also be improved to guide those

students not going on to college toward a vocational skill. There is a need to guide the understanding of those who are going on to a higher education so they will pursue a degree with a definite purpose in mind and not simply because it is something to do. Whatever their ultimate education, all students should be provided a solid understanding of both the free enterprise system and the opportunities and obligations offered by the educational system.

Educators and counselors have inadequately imparted objective enlightenment, either broad understanding or specific abilities, to multitudes of students. Many students, as a consequence of not being properly career oriented during their academic career, are unemployed or underemployed and therefore realize very little personal fulfillment in their achievements.

A typical situation reveals many guidance counselors are confronted with pamphlets, mimographed handouts, reference books, and other array of bewildering material from which they are expected to derive sufficient career and vocational information. The present inefficient process of information-gathering is further hampered by the lack of funding and the procurement of up-dated material from numerous outside sources.

Counselors are constantly being queried by students desiring some educational advice relative to their anticipated careers. The only material currently available for

such career counseling varies from school to school depending on the counselor's initiative and his or her individual knowledge of sources for such necessary material. Although no one has ever really questioned the value of practical counseling for high school students, it is difficult for secondary school counselors to obtain specific educational and career information to do an effective job of career counseling.

The ability of counselors to provide career counseling would be enhanced by the proposed "High School Handbook of Educational Career Plans" which alleviates the necessity of numerous reference sources and consolidates material that has been developed around the interests and the abilities of students.

Such a manner of career counseling would provide the information students require for future successful employment and would also allow the necessary curriculum information students need to bring personal fulfillment into their lives. It would, at the same time, stress the ability of the students to think, decide, and judge upon their ultimate destination and make them aware of why they are doing what they are doing.

Purpose of the Study

The specific objectives of this research were:

1. To determine a representative part of the projected career or academic interests of students presently

enrolled in the secondary schools of Clarksville-Montgomery County School System.

2. To collect and compile career information material developed around the interests and abilities of the students.

3. To process selected materials and later develop a "High School Handbook of Educational Career Plans for the Clarksville-Montgomery County School System," based on the results of this study.

4. To procure career information specific to the local labor market.

5. To provide avenues for students to explore an assortment of occupations on their own.

6. To provide secondary school counselors with the information and technique to perform their professional work of counseling and thus relieving them from the laborious task of sorting through a multitude of occupational and academic information.

7. To prepare career information in such a manner so it may easily be evaluated and maintained in a current fashion.

The ultimate purpose of this study will be to determine a need for the implementation of career or vocational curriculum selection capabilities for each individual student upon entry into high school, or grades nine through twelve. Each individual student will be presented a "High School Handbook of Educational Career Plans for the

Clarksville-Montgomery County School System" prior to registering for any secondary level classes. The publication will contain current graduation requirements, listing of class offerings (through the Clarksville-Montgomery secondary schools), a brief description of each class subject, an alphabetized listing of sampled careers or vocations, an occupational index with related courses of study, and suggested educational plans developed around major areas of occupations or subject interest. An "Individual Career Plan" section will also be included.

The student will be requested to complete the "Individual Career Plan" section of the handbook for each grade, nine through twelve, selecting his own individual career or vocational classes from the contents of the publication. Once the "Individual Career Plan" section is completed, the student could discuss his or her options or class choices with a school guidance counselor. Flexibility within options will allow the student the opportunity to change careers or vocations during the time prior to graduation since one particular plan or attempt may be the basis for various areas of eventual occupations.

Once the options or classes have been selected by the individual student and a counseling discussion has been conducted with a school guidance counselor, the "Individual Career Plan" would be duplicated and a copy placed in the student's permanent record file. The "High School Handbook

of Educational Career Plans" will be retained by the student for future personal references and for any later decisions or changes regarding the student's selections.

Limitations of the Study

1. The study was confined to students presently enrolled in academic curriculum subjects at New Providence Junior High School, Greenwood Annex, and Montgomery Central High School.

2. No attempt was made to include the socio-economic level of the students used in the study. It was assumed that random selection of students, at various grade levels, would be of sufficient control to equalize the effect of this variable.

3. The number of students included in the study who attended New Providence Junior High School, Greenwood Annex, and Montgomery Central High School was approximately one hundred seventy-five from each school.

Methodology

The method for encompassing all objectives and compiling the information contained within the proposed "High School Handbook of Educational Career Plans for the Clarksville-Montgomery County School System" is as follows:

1. Conduct a random occupational interest survey of students currently enrolled in secondary level grades. This study will be conducted in non-designated classes of

three secondary level schools within the Clarksville-Montgomery County School System. The schools selected were; New Providence Junior High School, Greenwood Annex, and Montgomery Central High School.

2. Compile an "Occupational Index with Related Plans" of the most desired careers, professions, and vocational occupations as gathered from the random survey.

3. Develop a listing of "Suggested Educational Career Plans" based on the major areas of selected occupations or subjects of interest as compiled from the random survey. Hypothetically, many areas of interest will contain more than one individual plan indicating several different approaches possible to that particular chosen occupational area.

4. Incorporate sufficient flexibility within the offered options to allow students the opportunity to change their selection of careers or vocations during their academic endeavors.

5. Obtain information utilized for the "Suggested Educational Career Plans" from the following sources:

- A. Colleges indicated by students as most likely to attend
- B. Local businesses and industries
- C. Employment agencies
- D. U. S. Government publications
- E. Readings in Occupational literature
- F. Personal interviews with individuals who are presently engaged in various areas of interest.

6. Conduct periodic evaluations of the proposed "High School Handbook of Educational Career Plans for the

Clarksville-Montgomery County School System" which will eventually be collated and published. Based upon the results of the evaluation, additional areas of interest and suggested educational plans may be added and those with declining student interest may be deleted.

Organization of the Study

Chapter 2 contains a diagnosis of various publications of articles, books, or related subjects concerning facts and data pertaining to this particular study. The ultimate purpose of this chapter will be to substantiate the eminent or negative need for such material to be made available to the high school students.

Chapter 3 includes the procedure employed to collect the pertinent data necessary to consider all proposed objectives stated in this study.

Chapter 4 depicts the results from the analysis of the collected data, indicating the feasibility of the study. Such data could be an influence on the future curriculum structure of our secondary schools.

Chapter 5 compares the data obtained through an analysis and the initial objectives as outlined in Chapter 1. Based on the conclusions, a determination was made whether to continue with or disregard the conclusive publication of the "Handbook of Educational Career Plans for the Clarksville-Montgomery County School System."

The portion regarding the recommendations lists any related activities or additional studies needed to further facilitate the student's academic endeavors.

CHAPTER 2

REVIEW OF RELATED MATERIAL

The one person most readily credited for coining the term "career education" is Sidney P. Marland, Jr., who was then the U. S. Commissioner of Education in 1971. He criticized educators and legislators who demanded that he provide a definition of the concept. Marland insisted a premature definition, especially from the Federal level, would only discourage interest in the idea from the local or state level educators, school patrons, and various governmental agencies.

Marland (1971) eventually defined "career education" as basically a blending of "vocational education", "general education", and "college-preparatory education." He stated the fundamental concept of career education is educational experiences, such as; curriculum, instruction, and counseling, and should be geared to the preparation for economic independence, personal fulfillment, and an appreciation for the dignity of work.

Despite Marland's advice to allow the concept of career education ample time for experimentation, various states initiated tentative programs and formulated different definitions. Some of the states' concepts are:

Iowa - Career education is all educational activities and experiences through which individuals learn about themselves in relationship to lifestyles and to the world of work.

Georgia - Career education is a concept through which all teachers, in all curriculum areas, assist individuals at each educational level to make continuous progress in acquiring the abilities necessary to manage the career aspects of their lives in ways that are both personally satisfying and productive.

Ohio - Career education is a concept designed to provide students with the necessary information and developmental experiences to prepare them for living and working in society.

Kansas - Career education is an educational process orienting all education and training toward enabling an individual to be skillful with his or her life.

Although the above definitions of career education identify activities or directions complementing only their own adopted definitions, virtually every program included the phases of awareness, exploration, and preparation. Therefore, the U.S. Office of Career Education (1976) has concluded the term "career education" to basically be interpreted as "the totality of experiences through which one learns and prepares to engage in work as part of his or her way of living."

In this sense, work is cited as a common element in the experiences of all humankind and can be particularly useful to anyone searching for a reason to engage in formal learning. Thus, the definition of career education is purposely intended to be of a very broad nature. Hoyt (1975) stated preparation for work will represent one of many goals of education while work itself refuses the limitations of a strict economic definition and reaches beyond to the broader aspects of productivity in one's total life style--including leisure time.

Career education must provide the opportunity for students to understand the role of work in one's society, the range of career opportunities open to them in the world of work, and the changes in our rapidly evolving society which may occur in the area of careers. This learning is essential for students to make intelligent career decisions.

Marland (1971) stresses that career education focuses on learning for a purpose, rather than just learning for the sake of learning. Students' desire or motivation to increase their knoweldge will increase notably when they can relate between what they are learning in school and to what purpose that knowledge may be useful when applied later.

Career education is described by Hoyt (1976) as the total effect of the formal education system and the broader community to help every one - both youth and adult - better

understand and capitalize on the changing relationship between education and work. In essence, career education seeks to make employment a meaningful part of the American lifestyle. The goal should apply equally to all people of this nation: high school dropouts and college graduates, male and female, the mentally handicapped and the intellectually gifted, and the rich and the poor.

Wilson (1977) stresses too many students fail to see the meaningful relationships between what they are being asked to learn in school and what they will do when they leave the educational system. This is true of both those who remain to graduate and those who drop out of the educational system.

Youth, whether dropout or graduate, at secondary or post-secondary level, have been inadequately prepared to earn a living and to meet the needs of the labor market. The deficiency has not just been job skills. Those skills are often the easiest to supply, such as on-the-job training, an alternative method. The major deficiencies were: the lack of attitudes toward work, the knowledge of alternative career choices, human relation skills, systematic and professional career guidance by counselors, plus others. All of these are considered by educators to be the essence of career education.

Hoyt (1974) states career education will require some radical reconstruction of philosophy, objectives, and

techniques. Career education promises to supply many attributes needed along with job skills. It also provides a specific objective and measurable criteria for evaluation.

Super (1969) emphasizes his career pattern concept which indicates that an occupational choice is not a one-time selection but rather a cycle allowing for different vocational options during one's life. His theory supports the influence of society on an individual's competencies and self-concept. The role of the parental socio-economic level, mental abilities, and various opportunities to which an individual could possibly be exposed will affect a person's future career decisions. He asserts that self-concept formation requires a person to realize himself as a distinct individual, and yet be aware of the existing similarities between himself and others.

Many critics have accused Donald Super of not including elementary school children in his viewpoint of career development. This is not necessarily true, as Super (1969) stated in his first volume of The Counseling Psychologist, an individual's starting point is his father's socio-economic status. This analysis identifies five familiar life stages: growth (childhood), exploration (adolescence), establishment (young adulthood), maintenance (maturity), and decline (old age).

Even though many of Super's writings are concerned with the exploration, establishment, and maintenance stages

of career development, he does include early childhood in his viewpoint. He also indicated the level of vocational development attained by ninth grade boys is not sufficient for them to make sound vocational or prevocational decisions, and even in the twelfth grade there appears only a limited basis for sound decision-making in the majority of students. Because of his study, Super is considered as being responsible for policy decisions regarding middle school or junior high years as "exploratory stages" in today's current career educational programs.

In his research, Borow (1966) refers to the middle school years as those when children are more apt to acquire the occupational aspirations and occupation expectations. For a second or third grader to want a certain vocation is equivalent to having it. He considered self-estimated and objectively determined scores on interest, aptitude, and values, in that order, converge on one another between the ninth and twelfth grades.

Many authors on the subject of career education have commented on the changing role of the school counselor in the school development. Gaymer (1972) asserts that the area of career planning is a more important part of career counseling than hastening students toward career decisions. She placed major emphasis on the rapidity of change students face in these times and their great need to be flexible and adaptable to changing external conditions.

McDaniels (1968) points to the fact that, with the senior high schools expanding their movement toward serving all students, (not just those contemplating college), students must make some choices with reference to high school curriculum subjects. He considered such curricula choices as having definite career implications. Finally, McDaniels refers to the equally obvious fact that youths are making choices now, with increasing numbers being in the labor market on a part- or full-time basis. Perhaps the most significant point McDaniels makes is the myriad of studies indicating students' lack of readiness for vocational planning may relate the fact students' observations on career development may have been made in situations where systematic professional assistance was inadequate.

Jerome (1973) states a counselor's role will increasingly be defined to include "consultants for curriculum development" and "coordinator of special student needs." He clarified his statements by saying, "This role of the counselor as a resource person and as an activist will grow in importance as the career education movement increases in range and depth."

Meyer (1973) specified four roles for the counselor in career education:

1. To provide assistance in initiating, developing, and implementing career education into the regular classroom.
2. To provide up-to-date and relevant career education information for pupils and faculty.

3. To provide appropriate group guidance activities.
4. To provide career counseling services for individual students.

Meyer concludes his article by stating that after pupils have had the benefit of a comprehensive career educational program, the counselor can assist them in exercising their freedom of choice by helping them fit all the pieces together and place them in proper perspective. Finally, the counselor can help the individual student make the transition from school to the next step, whether it be immediate employment or further education.

In summary, just as career education is properly viewed only as a part of education, so is career development. In this respect, counselors must be prepared to assist with a wide variety of student problems brought to them, in addition to helping those concerned specifically with assistance in the making of any educational and vocational decisions.

Despite the diverse nature of such problems, the professional counselor in the school, more so than any other professional on the school staff, should see his primary function as being career development within a total program of career education. There is no way in which an adequate career development program can be expected to function in the absence of professionally-prepared counselors and adequate, up-to-date, and related material with which to properly counsel students regarding their careers.

CHAPTER 3

METHODOLOGY OF THE STUDY

Two basic Interest Inventory measures were utilized in this study: The Self-Directed Search and the Vocational Preference Inventory. Both inventories were designed by John L. Holland, Ph.D., and the results are compatible to the extent both could be administered with one end result. The primary purpose for employing two different measuring devices was to obtain the best representation of the average student's career interests and abilities.

The two interest measures were administered to approximately one hundred seventy-five students at each of the three participating schools; Montgomery Central High School, Greenwood Annex, and New Providence Junior High School. The measures were given alternately to participating students to enhance the validity of the study.

The students were not forewarned of being involved in the study and were selected by classes at random. An explanation was made to each class prior to administration concerning the particular measures and the utmost efforts requested to obtain as true results as possible. The surveys were administered at the various schools under the most similar conditions and time factors for general standardization purposes.

Upon completion, the interest surveys were hand-scored to obtain a listing of the most desired careers, vocations, or professions. The student inventories at each of the respective schools were maintained in two groups according to completed inventories.

After processing each student's interest inventory, an individual summary code was determined. The accumulated interests and abilities reflected by the combined inventories were utilized as a base for the structuring and development of the "Occupational Index with Related Career Plans" and the "Suggested Educational Career Plans" sections.

Due to the enormous number of various occupations in our present economy, the grouping of the students' responses was made in conjunction with the thirteen clusters of related jobs and major industries as listed in the Occupational Outlook Handbook published by the U. S. Bureau of Labor Statistics.

The structuring of the "Suggested Educational Career Plans" was derived from personal interviews with individuals presently engaged in the various areas of interest, U. S. Government publications, readings in occupational literature, college bulletins, local businesses and industries, and the local employment agencies for information regarding high demand positions within the local area.

CHAPTER 4

ANALYSIS OF DATA

Personality inventories typically contain many questions concerning interests and abilities as well as other aspects of personality. A more modern conception of interests is that they are the reflection or expressions of individual needs and personality traits. This was the approach taken when the analysis was being conducted of the interest inventories completed by the students involved in this study.

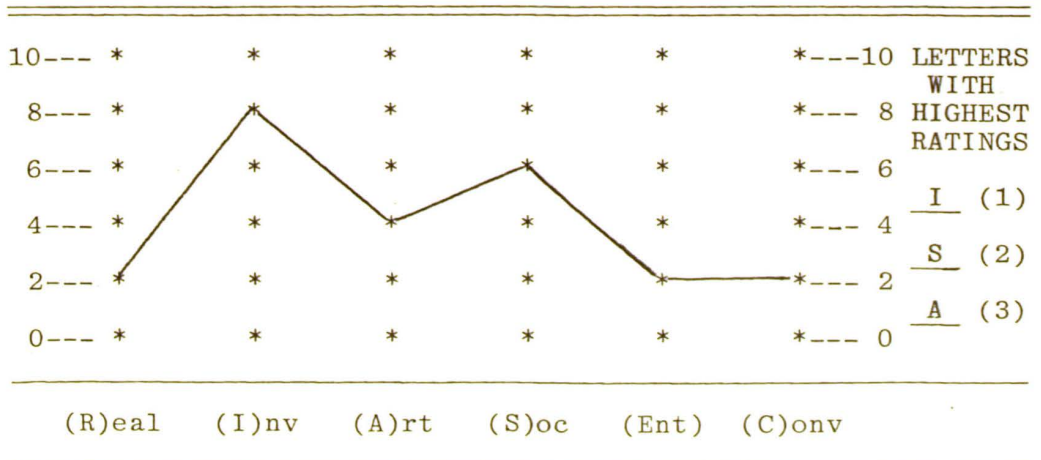
A total of five hundred twenty-five students participated in this study. The students were divided into two groups at each of the participating schools, and each group was administered a separate interest inventory. At the completion, the inventories were maintained in two groups. Group I was composed of two hundred sixty-two students completing the Self-Directed Search Inventory, and Group II consisted of two hundred sixty-three students completing the Vocational Preference Inventory.

To analyze or determine the interests and abilities of Group I, each interest inventory was hand-scored. The Self-Directed Search Inventory consisted of three major divisions; Activities, Competencies, and Occupations. Each major division was further divided into six sub-categories;

(1) Realistic occupations, (2) Investigative occupations, (3) Artistic occupations, (4) Social occupations, (5) Enterprising occupations, and (6) Conventional occupations.

Scoring of the Self-Directed Search inventory was accomplished by totaling the number of "Yes" answers for each of the six subgroups under each of the three major divisions. The six individual scores for each of the subgroups were then plotted on a graph for each major division. An example of one of the three major divisions and its six related subgroups is presented in Table 1. Once the graph was complete, the letters for the three highest scores were recorded. This procedure was followed until three letter scores had been obtained for each of the three major divisions for each student.

Table 1
Activities Graph
(Example)



The final step of analysis was to determine each individual's summary code. The data from the graphs of the three major divisions were used in this determination. As can be noted in Table 2, which is an example, the number of times each letter occurred in first place, second place, and third place was recorded after each appropriate letter. Each letter in first place was multiplied by three, second place by two. The resulting numbers were then added across so a total was obtained for each letter. The letters with the three highest scores indicated the individual student's summary code.

Table 2

Determination of Student's Summary Code
(Example)

	<u>1st Place</u>	<u>2nd Place</u>	<u>3rd Place</u>	<u>TOTAL</u>	
R	___ X 3 = ___	___ X 2 = ___	___	___	R
I	___ X 3 = ___	___ X 2 = ___	___	___	I
A	___ X 3 = ___	___ X 2 = ___	___	___	A
S	___ X 3 = ___	___ X 2 = ___	___	___	S
E	___ X 3 = ___	___ X 2 = ___	___	___	E
C	___ X 3 = ___	___ X 2 = ___	___	___	C
<u>SUMMARY CODE</u>		<u>Highest</u>	<u>2nd</u>	<u>3rd</u>	

Using the Occupations Finder, a component of the Self-Directed Search Inventory, which contains four hundred

sixty-five occupations, the student's summary code was then compared to the listing of various occupations shown for that particular sequence of letters. Each of the two hundred sixty-two administered Self-Directed Search Inventories were analyzed in this manner. The collected data are presented in Table 3 and reflect the number of students whose summary code denotes each category of interest and abilities.

Table 3

Students' Occupational Interests as Determined
by the Self-Directed Search Inventory
(Group I)

Abilities	Interests			Total	
	Activities	Competencies	Occupations	Stu	%
Realistic	22	20	18	60	23
Investigative	15	15	17	47	18
Artistic	13	10	9	32	12
Social	15	12	15	42	16
Enterprising	11	8	13	32	12
Conventional	19	11	19	49	19
Total (Students)	95	76	91	262	

The Vocational Preference Inventory, completed by two hundred sixty-three students, was included in Group II of the study. In order to determine each student's interests

and abilities, each inventory had to be hand-scored. The answer sheet consisted of eleven scales scored by counting the "correct" responses using a single scoring stencil. To determine each student's primary field of vocational interest and to maintain congruity and validity between the two measuring instruments, only the first six scales were considered. These scales were; (1) Realistic occupations, (2) Investigative occupations, (3) Artistic occupations, (4) Social occupations, (5) Enterprising occupations, and (6) Conventional occupations. Each inventory was interpreted accordingly.

The total of the correct responses for each of the six scales was plotted on a graph to determine each student's vocational profile. The graphs were scanned for the three highest scales, regardless of elevation, and the letter corresponding to the scales was recorded in rank order. The resulting three letters for each graph represented the individual student's summary code.

The process of determining the student's interests and abilities was similar to the method employed when determining the results obtained from the Self-Directed Search Inventory. Using the Occupational Finder, a compatible instrument of the Self-Directed Search, each student's occupational category was located and recorded. The total number of students and the percentage of each group are presented in Table 4.

Table 4

Students' Occupational Interests as Determined
by the Vocational Preference Inventory
(Group II)

Interests & Abilities							
	(R)eal	(I)nv	(A)rt	(S)oc	(E)nt	(C)onv	Total
Students	76	53	34	45	21	34	263
Percentage	29%	20%	13%	17%	8%	13%	100%

An occupational preference index with related plans was compiled from the Occupational Finder and included only the most favored occupations or professions as determined by the combined analysis of the student's interests and abilities from both measuring instruments. The occupational index with related educational plans is presented in Table 5 and arranged in thirteen clusters of related jobs as defined by the Occupational Outlook Handbook, published by the U. S. Department of Labor. The educational plans are keyed by numbers to the "Suggested Educational Career Plan" listing presented in Appendix A. These plans are developed around the indicated major areas of occupations or subject interest. Many areas of interest contain more than one individual plan as several different approaches are possible to that particular chosen occupational area.

Table 5

Occupational Preference Index with Related Career Plans

Career Cluster	Description	Educational Plan
1	<u>Industrial Productions</u>	
	Machining Occupations:	
	General Machinist	23
	Machine Tool Operator	23
	Printing Occupations:	
	Bookbinder & related work	5, 6, 27
	Lithographic Occupations	27
	Photoengravers	6, 10, 27, 28
	Printing Press Operator	21
	Other Related Occupations:	
	Automobile Painters	1
	Ophthalmic Technicians	5, 25
	Photo Lab Technicians	6, 10
		15, 27, 28
	Welding	30
2	<u>Office Occupations</u>	
	Bookkeepers	5, 6
	Cashiers	5, 6, 10
	File Clerk	5, 13
	Office Machine Operator	5, 6
	Secretaries & Stenographers	5, 6
	Stock Clerk	5, 9
	Typists	6, 6
	Computer & Related Occupations:	
		5, 6
	Computer Operating Personnel	7, 11, 12
		5, 6
	Programmers	7, 12, 24
	Administrative & Related Occupations:	
	Accountants	6, 24
	Advertising Workers	6, 13, 15, 27
	City Managers	6, 10, 28
	Credit Managers	6, 10, 24
	Hotel Managers	5, 6, 16, 21

Table 5 (Continued)

Career Cluster	Description	Educational Plan
	Lawyers	6,19,23,28
	Marketing	6, 9,10
	Public Relation Workers	13,15,19
3	<u>Service Occupations</u>	
	Cleaning & Related Occupations:	
	Cooks & Chefs	20,21
	Food Counter Workers	16,20
	Waitresses & Waiters	16,20
	Personal Services:	
	Barbers	26
	Cosmetologists	26
	Protective Services:	
	F.B.I. Agents	6,19,24,28
	Police Officers	5,13
		19,24,28
	State Police Officers	13,19,28
4	<u>Education & Related Occupations</u>	
	Teaching Occupations:	
	Kindergarten & Elem. Teachers	13,15
		19,24,28
	Secondary Teachers	6,13,15
		19,24,28
	Library Occupations:	
	Librarians	13
5	<u>Sales Occupations</u>	
	Auto Parts Counter Worker	1, 5, 6, 9
	Automobile Salesworker	5, 6, 9
		10,13,26
	Models (Fashion/Photo)	14
	Real Estate Salesworkers	5, 6
		9,10,13

Table 5 (Continued)

Career Cluster	Description	Educational Plan
6	<u>Construction Occupations</u>	
	Bricklayers	8,22
	Carpenters	8,22
	Cement Masons	8,22
	Drywall Installers	8,22
	Electricians	8,11,12,22
	Painters & Paperhangers	8,22
	Plumbers	8,22
	Sheet Metal Workers	22,30
7	<u>Transportation Occupations</u>	
	Air Transportation Occupations:	
	Airplane Mechanics	1
	Airplane Pilots	24,28
	Flight Attendants (Stewardesses)	13,15
		19,24,28
8	<u>Scientific & Technical Occupations</u>	
	Conservation Occupations:	
	Foresters	3
	Agriculture Engineers	3
	Electrical Engineers	8,12,28
	Environmental Scientists:	
	Geologists	19,24,28
	Meteorologists	24,28
	Oceanographers	24,28
	Life Science Occupations:	
	Biochemists	19,24,28
	Zoologists	19,24,28
	Mathematic Occupations:	
	Mathematicians	24
	Physical Scientists:	
	Astronomers	24,28
	Chemists	24,28

Table 5 (Continued)

Career Cluster	Description	Educational Plan
	Other Scientific Occupations:	
	Broadcast Technicians	11, 12
		13, 24, 28
	Drafters	8, 22, 24
9	<u>Mechanic & Repairers Occupations</u>	
	Air Conditioning & Refrigeration	2
	Auto Body Repairers	1
	Automobile Mechanics	1
	Farm Equipment Mechanics	1, 3
	TV & Radio Technicians	11, 12
10	<u>Health Occupations</u>	
	Dental Occupations	
	Dental Assistants	18
	Dental Hygienists	18
	Dental Technician	18
	Dentists	18, 24, 28
	Medical Occupations:	
	Operating Room Technician	18
	Optometrists	25
	Physicians	18, 24, 28
	Veterinarians	16, 24, 28
	Nursing Occupations:	
	Licensed Practical Nurse	18, 28
	Registered Nurse	18, 28
	Therapy Occupations:	
	Physical Therapist	18, 28
	Speech & Audiologists	13, 15, 18, 28
	Other Health Occupations:	
	Dietitians	18, 21, 28
	Pharmacists	18, 24, 28

Table 5 (Continued)

Career Cluster	Description	Educational Plan
11	<u>Social Scientists</u>	
	Historians	13,17,19
	Political Scientists	13,15,19
	Psychologists	28
12	<u>Social Service Occupations</u>	
	School Counselors	24,28
	Employment Counselors	24,28
	Clergy	13,19
	Other Social Occupations:	
	Home Economists	20,21,28,29
	Social Workers	13,24,28,29
13	<u>Art, Design & Communication Related Occupations</u>	
	Performing Artists:	
	Actors & Actresses	15
	Dancers	15
	Musicians	15
	Design Occupations:	
	Architects	22,24,28
	Commercial Artists	115
	Floral Design	15
	Industrial Engineer	24,28
	Interior Designers	15,21,24
	Photographers	6,10,15,28
	Communication-Related Occupations:	
	Interpreters	13,17,19
	Newspaper Reporters	13,15,19
	Radio & TV Announcers	12,13,15,27
	Technical Writers	13,15,17,19

An analysis was made to indicate the level of general educational development each of the preferred occupations demanded. This was accomplished by cross referencing each occupation to the data provided in the Occupational Outlook Handbook. The occupations requiring the completion of high school and/or a technical school were rated at level 3. The occupations requiring the completion of technical or business training or a junior college were rated as level 4. For level 5, college was required, and level 6 indicated post-college education necessary. The academic requirements for the occupational interests, as reflected by the combined Groups I and II, are presented in Table 6.

Table 6
Occupational Academic Requirements
(Groups I & II)

LEVEL	S.D.S (Group I)		V.P.I. (Group II)		TOTAL Avg	
	Student	Percent	Student	Percent	Student	Percent
No. 3 (H/S or Tech)	66	25	63	24	129	24
No. 4 (Tech or Jr. Coll.)	76	29	84	32	160	31
No. 5 (College) (4 yr)	68	26	74	28	142	27
No. 6 (Post- College)	52	20	42	16	94	18

CHAPTER 5

CONCLUSIONS & RECOMMENDATIONS

The primary purpose of this study was to determine a representative part of the projected career or academic interests of students presently enrolled in the secondary schools of Clarksville-Montgomery County School System. A secondary purpose was to collect and compile career information material based on the interests and abilities of the students in order to ultimately process selected materials and develop a "High School Handbook of Educational Career Plans for the Clarksville-Montgomery County School System."

The major conclusions drawn from the analysis of data were:

1. The usage of the Vocational Preference Inventory and the Self-Directed Search Inventory indicated that both instruments were congruous in the determination of students' similarities to each of the six occupational types incorporated in the study.

2. The usage of the Vocational Preference Inventory and the Self-Directed Search Inventory was useful in obtaining a fair representation of students' projected careers and anticipated educational achievement levels.

3. The tallying of results indicated that students in the Clarksville-Montgomery County School System were

deviating from the normal ratio of 80 percent to 20 percent expected to continue educational achievement at college level. Percentages shown on Table 6 reflected only forty-five percent of students surveyed anticipate going on to college and the interest in technical schools or junior colleges was increasing.

4. The selection of students' occupational interests was realistic and of a nature that would permit possible achievement. Distribution was fairly consistent with no heavy concentration in any particular or "dream" areas.

5. The compilation of data from the analysis provided the means to develop an "Occupational Career Preference Index with Related Plans", as presented in Table 5, which will provide secondary counselors with pertinent information to aid in career counseling.

6. The usage of the "Occupational Career Preference Index with Related Plans" in conjunction with the "Suggested Educational Career Plans" as contained in Appendix A of this study, will provide avenues for students to explore the requirements for various occupations on their own and assist them in the selection of curriculum.

7. The establishment of flexibility within planning options will allow students the opportunity to change careers or vocations during the time prior to graduation.

RECOMMENDATIONS

1. The enthusiasm and seriousness shown by students participating in this study, in conjunction with the data obtained from the analysis, indicated a definite need for the proposed "Handbook of Educational Career Plans for the Clarksville-Montgomery County School System."

2. The Director of Pupil Personnel should be responsible for supervision of the publication and distribution of information, as supplied by school counselors or committee, to maintain the "Handbook of Educational Career Plans" at a current level.

3. Curriculum and nomenclature of academic subjects should be standardized in all secondary schools within the Clarksville-Montgomery County School System to provide ease of maintaining the suggested educational career plans.

4. Additional periodic interest surveys should be conducted to assist counselors in maintaining and evaluating material.

5. Procurement of machine-scored interest inventories such as the Kuder DD Occupational Interest Surveys, the S.R.A. Vocational Planning Inventory, and the Career Maturity Inventory, which are similar in nature to those used in this study, would eliminate time consuming hand-scoring and facilitate the perpetual revisions.

6. Counselors should endeavor to receive and maintain current publications of Occupational Outlook Handbook, Occupational Outlook Quarterly, and the Occupational Outlook Handbook in Brief. These publications are available from the U. S. Department of Labor.

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APPENDIX A: SUGGESTED EDUCATIONAL CAREER PLANS

APPENDIX A

SUGGESTED EDUCATIONAL CAREER PLANS

PLAN 1 AIR / AUTO MECHANICS

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
General Math	Algebra I	U.S. History	Biology
Science	Econ/Health	Phy. Ed.	Geometry
Mech. Drawing	Auto Mech I	Auto Mech II	Auto Mech III

Highly Recommended Electives: Bookkeeping, Drivers Ed.
Chemistry, Physics, Speech I. (Substitution of Auto
Body & Painting may be made for Auto Mech I, II, &
III)

PLAN 2 AIR CONDITIONING / REFRIGERATION

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Chemistry
Mech. Drawing	Biology	Drafting-Arch I	Drafting-Arch II
G. Math/Alg.	Air Cond I	Air Cond II	Air Cond III

Highly Recommended Electives: Physics, Speech I, Geometry,
Distributive Education.

PLAN 3 AGRICULTURE / CONSERVATION

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Physics
G. Math	Billogy	Chemistry	Trig/Analy. Geo.
Phy. Ed.	Algebra	Bookkeeping I	Office Machines

Highly Recommended Electives: Speech I, Psychology,
Sociology, American History, Civics, Bookkeeping II.

PLAN 4 AGRICULTURE SCIENCES

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Ag. Science II
G. Math	Ag. Mech I	Ag. Mech II	Ag. Mech III
Ag. Science I			
Phys. Ed.			

Highly Recommended Electives: Ag. Science III and IV,
Speech, Psychology, Chemistry.

PLAN 5 BUSINESS (CLERICAL)

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Typing I	Typing II	Bus-Law & Math	Office Machines
Phys. Ed.	Shorthand I	Bookkeeping I	Bookkeeping II
G. Math	Econ/Health	U.S. History	Shorthand II

Highly Recommended Electives: General Business, Business
Math., Steo Lab I & II, Speech.

PLAN 6 BUSINESS (ADMINISTRATIVE)

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Typing I	Econ/Health	U.S. History	Shorthand II
Science	Algebra I	Phys. Ed.	Biology
G. Math	Bookkeep I	Shorthand I	Chemistry

Highly Recommended Electives: Bookkeeping II, Advanced
Algebra, World Geography, American Govt., Civics,
Speech, General Business.

PLAN 7 COMPUTER SCIENCES

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Physics
Algebra I	Data Proc. I	Data Proc. II	Data Proc. III
Typing			
Phys. Ed.			

Highly Recommended Electives: Typing, Bookkeeping II,
Advanced Algebra, Distributive Ed., Psychology.

PLAN 8 CONSTRUCTION

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Drafting-Arch I
G. Math	Algebra	Geometry	Phys. Ed.
Mech. Dwg. I	Bldg Trds I	Bldg Trds II	Bldg Trds III
Shop			

Highly Recommended Electives: Drafting-Arch II, Trigonometry, Business Law, Psychology, Chemistry.

PLAN 10 DISTRIBUTIVE EDUCATION (MANAGEMENT)

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Typing I	Econ/Health	U.S. History	Chemistry
Algebra I	Phys. Ed.	Biology	Gen. Business
Science	Algebra II	D.E. I	D.E. II

Highly Recommended Electives: Bookkeeping I and II,
Typing II, Foreign Language, World Geography.

PLAN 11 ELECTRONICS

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
G. Math	Econ/Health	U.S. History	Gen. Business
Science	Phys. Ed.	Algebra I	Electronic III
Mech Dwg I	Electronic I	Electronic II	

Highly Recommended Electives: Speech, Typing I, Bookkeeping I, Office Machines.

PLAN 12 ELECTRONICS (ADVANCED)

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Algebra I	Econ/Health	U.S. History	Biology
Science	Geometry	Algebra II	Chemistry
Phys. Ed.	Electronic I	Electronic II	Electronic III

Highly Recommended Electives: Chemistry, Physics, Foreign Language, Mechanical Drawing, Speech, Drama, Trig/Anal. Geometry.

PLAN 13 ENGLISH

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Foreign Lang.
Algebra I	Geometry	Foreign Lang.	Speech I
Phys. Ed.	Biology	Chemistry	Am. Govt.

Highly Recommended Electives: Advanced Algebra, Foreign Language (second), Speech II, Civics, World Geography.

PLAN 14 FASHION / MODELING

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Drama II
G. Math	Home Ec. I	Drama I	Home Ec. II
Art I	Cosmetology I	Cosmetology II	Cosmetology III
Phys. Ed.			

Highly Recommended Electives: Speech, Physical Education, Business Law, Business Math, Textile & Clothing, Prep. of Adult Living, Advanced Art, Speech II, Studio Art.

PLAN 15 FINE ARTS

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	World History
Algebra I	Geometry	Biology	Chemistry
Phys. Ed.	Studio Art	Adv. Art	Music Theory
Art I	Music/Chorus	Concert Choir	Speech

Highly Recommended Electives: Algebra II, American Government, Civics, Psychology, Foreign Language, Speech I & II, Drama, Band, Chorus.

PLAN 16 FOOD SERVICES

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Psych/Adv.
Gen. Math	Home Ec. II	Biology	Foods
Home Ec. I	Food Serv. I	Food Serv. II	Chemistry
Phys. Ed.			Food Serv. III

Highly Recommended Electives: Sociology, Foreign Language, Algebra, Physics, Office Machines.

PLAN 17 FOREIGN LANGUAGE

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Am. Govt.
Foreign Lang.	Foreign	Foreign Lang.	Foreign Lang.
Algebra I	Lang.	Adv. Algebra	Chemistry
Phys. Ed.	Geometry	Speech I	Civics
	Biology		

Highly Recommended Electives: Trigonometry, Analytic Geometry, Second Foreign Language, Speech World History, World Geography.

PLAN 18 HEALTH OCCUPATIONS

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Foreign Lang.
G. Math	Biology	Chemistry	Physical
Foreign Lang.	Health	Health Occ. II	Health
Phys. Ed.	Occ. I		Occ. III

Highly Recommended Electives: Typing, Algebra, Speech I & II, Art I, Office Machines, Bookkeeping I & II, Shorthand, Mech. Drawing, Psychology, Sociology, Business Law.

PLAN 19 HISTORY

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Chemistry
Algebra I	Foreign Lang.	Biology	World History
World Geog.	Phys. Ed.	Foreign Lang.	Amer. Govt.

Highly Recommended Electives: Geometry, Advanced Algebra, Speech I, Speech II, Typing, Physics.

PLAN 20 HOME ECONOMICS

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Drafting I
Algebra I	Phys. Ed.	Biology	
Home Ec. I	Food Serv. I	Food Serv. II	Food Serv. III

Highly Recommended Electives: Mechanical Drawing I,
Drafting-Architectural I, Business Math, Business Law.

PLAN 21 HOME ECONOMICS (ADVANCED)

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	World History
Home Ec. I	Draft-Arch I	Home Ec. II	Draft-Arch II
Algebra	Phys. Ed.	Geometry	Adv. Algebra

Highly Recommended Electives: Mechanical Drawing I,
Chemistry, Physics, Art I, Textile & Clothing,
Housing & Home Furnishing, Psychology.

PLAN 22 INDUSTRIAL ARTS & TRADES

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Wood Work II
Shop	Wood Work I	Draft-Arch I	Draft-Arch II
Algebra I	Bldg. &	Bldg & Trds II	Bldg &
Phys. Ed.	Trds I		Trds III

Highly Recommended Electives: Drafting-Mech. I, Business
Law, Speech, Geometry, Business Math.

PLAN 23 MACHINE TRADES

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Chemistry
Gen. Math	Algebra I	Draft-Mech I	Geometry
Mech Dwg I	Mach, Shop I	Mach,Shop I	Mach,Shop III
Shop			
Phys. Ed.			

Highly Recommended Electives: Geometry, Trigonometry,
Biology, Physics.

PLAN 24 MATHEMATICS

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Physics
Algebra I	Geometry	Algebra II	Trig/Anal.
Phys. Ed.	Biology	Chemistry	Geom.
			World History

Highly Recommended Electives: Drafting I & II, Foreign
Language, Civics, Speech I, Psychology.

PLAN 25 OPTOMETRICS

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Chemistry
Mech. Dwg I	Algebra I	Biology	Phys. Ed.

Highly Recommended Electives: Psychology, Sociology,
Physics, Physical Ed., Geometry, Office Machines.

PLAN 26 PERSONAL SERVICES

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Office
G. Math	Bookkeep I	Bookkeep II	Machines
Phys. Ed.	Cosmetology I	Cosmetology II	Cosmetology III

Highly Recommended Electives: Psychology, Sociology,
Business Law, Business Math.

PLAN 27 PRINTING & PUBLICATIONS

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Studio Art
Typing I	Geometry	Typing II	Phys. Ed.
Art I	Graph Art I	Graph Art II	Graph Art III
Algebra			

Highly Recommended Electives: Mechanical Drawing, Geometry,
Chemistry, Physics.

PLAN 28 SCIENCE

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Am. Govt.
Algebra I	Geometry	Algebra II	Trig/Anal
Phys. Ed.	Biology	Chemistry	Geom
			Physics

Highly Recommended Electives: Foreign Language, Psychology,
Advanced Biology, Sociology, World History, World
Geography.

PLAN 29 SOCIAL SERVICES

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Chemistry
G. Math	Home Ec. II	Speech I	Am. History
Home Ec. I	Child Care I	Child Care II	Child Care III
Phys. Ed.			

Highly Recommended Electives: Advanced Foods, Textile & Clothing, Housing & Home Furnishing, Preparation for Adult Living, Child Development, Psychology, Sociology.

PLAN 30 WELDING

Recommended Courses:

Grade:

<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
English I	English II	English III	English IV
Science	Econ/Health	U.S. History	Chemistry
G. Math	Algebra I	Geometry	
Phys. Ed.	Metal Occ I	Metal Occ II	Metal Occ III

Highly Recommended Electives: Mechanical Drawing I, Drafting-Mechanical I, Biology, Physics.