Developed as part of an exemplary project for a rural, economically depressed area, this resource guide identifies locally produced curriculum and instructional materials. Items found in the annotated guide include: (1) teaching units for levels 1-6, (2) occupational awareness tests, (3) questionnaires, and (4) inservice training methods and materials. In addition to the annotation, each listing includes the grade level for which it was designed and the extent to which the materials have been tested, refined, and validated in actual classroom use. The guide cites an evaluation study of this exemplary project in career education. It is hoped that other educators who are engaged in planning and implementing career education programs will benefit from this resource guide. Related documents are available as VT 014 729-VT 014 732 and VT 014 487, in this issue. (JS)
"Improving a Rural Area School Program with Expanded Vocational Education Services by Utilizing Comprehensive Career Orientation and Exemplary Activities"

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

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Annotated Bibliography of Locally Produced Curriculum and Instructional Materials

Developed by
Lincoln County Exemplary Project Staff

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The Lincoln County Exemplary Project in Career Education was funded in January, 1971. The staff was involved in planning and program development during the spring and summer, 1971. The Career Awareness Component of the project was initiated in September, 1971, in grades 1-6. Grades 7-8 will be phased in at the beginning of the spring, 1972, semester. Grades 9-12 will come into the program in the fall of 1972.

This resource bibliography contains a listing and description of all teaching units, tests, questionnaires, in-service training methods and materials and all other resources developed by the exemplary staff thus far in the process of implementing the Career Education Project in Lincoln County.

Each item listed is followed by an annotation describing the nature of the materials, the grade level for which each item was designed, and the extent to which the materials have been tested, refined, and validated in actual classroom use. Materials developed for use in in-service training of teachers and counselors are included in a separate section of the bibliography.

The urgent need for the development, implementation, and diffusion of the reality centered career education focus in our nation's school systems make it imperative that all those
involved in this effort pool their resources and share successful strategies across county and state geographical divisions. This resource guide is prepared with the objective of aiding in that process.

LINCOLN COUNTY EXEMPLARY PROJECT STAFF

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A number of occupational resource units have been prepared by the staff of the Lincoln County Exemplary Project in Career Education as resource guides for use by teachers at each grade level. The units can be used by teachers in the classroom, or as models in creating their own units.

The units for the first and second grades begin with the immediate environment and gradually broaden to encompass the larger community environment. The first grade units introduce the child to the world of work by encouraging investigation and interpretation of the working life of members of his immediate family. This is followed by studying workers with whom he comes into contact. The second grade units introduce the student to new and different kinds of workers in the community, those workers not in his family or at school.

The units for grades three through six are designed to increase occupational horizons from the immediate environment to the larger community. Comparing and contrasting occupations in the immediate area to those found in other communities, the units provide the child with an opportunity to become aware of the encompassing nature of work.

Third grade units continue to emphasize the lower primary approach of total and small group activities under the teacher's leadership. The fourth grade units integrate students' efforts and interests into activity-planning providing for individual differences. The units in grades five and six include instruction and experience that will enable students to develop
positive attitudes toward work, identify and choose goals for themselves, and study occupational areas in which they are interested.

The format of each resource unit contains a synopsis of the entire unit, general objectives, behavioral objectives, teaching strategies, evaluative techniques, methods for correlating of subject matter, and specific teaching units, each focusing on a particular occupation or group of occupations at the appropriate level for each grade. Also included are suggested field trip sites, techniques for use of experience charts, suggested parental letters, and a resource bibliography of materials available for each unit.

The teaching units have certain common elements. Each has a behavioral objective, describing the desired outcome or result of the unit in terms of student learning. Each teaching unit is also divided into three basic components; procedures, student activity, and notes and resources. The procedures section provides the teacher with a blueprint for action in implementing a unit. Student activity outlines the nature of student involvement in the effort, and notes and resources provides suggestions for appropriate filmstrips, books and other types of multi-media occupational resources, as well as suggestions for academic subject matter correlation.

A curriculum model has been developed by the Lincoln County Exemplary staff which emphasizes a curriculum blending approach with traditional academic subject matter areas.
organized around the career education theme. The units all include six elements. These are in order of ascending complexity: field trips, simulated exercises, competence development, resource role models, and multi-media occupational information. Each of the units described in this guide is based on this career education model.

Many of the units developed for grades 1-6 have been used by Lincoln County classroom teachers during the current semester. Others have been used as models as teachers have developed their own units. Feedback from teachers thus far in the course of the project indicate that the units have been instrumental in gaining student involvement, in making academic subjects more relevant, and diminishing the distinction between classroom and "real world".

The Resource Units are listed in the following pages in sequential order, levels one through six. The format is as follows: There is an overall discussion of each level's resource unit, followed by a brief discussion of each teaching unit within that resource unit.
SOURCES FOR TEACHING CAREER EDUCATION


This unit focuses on jobs in the family, and on workers with whom the child comes into contact in the more immediate environment. The emphasis is on the child and his family, understanding of self, and an awareness of how the child relates to the world around him. An awareness is created of the ways in which the child relates to the world around him by providing a wide variety of experiences integrating the world of work into the total environment.

TEACHING UNITS - LEVEL ONE

Wonderful World of Work

The behavioral objective for this unit is "to bring about student recognition of the many job clusters as they relate to the world of work in career awareness". The strategy here is to begin the unit by allowing students to build upon whatever data or attitudes they already possess about jobs, and then begin to explore new possibilities that may not be so apparent in the community. Techniques and methods recommended include brainstorming, making of scrapbooks, and tape recorded discussions of job interests.

Working At Home

The behavioral objective for this unit is to enable the student "to name the different kinds of activities that people perform within the family". The primary emphasis in this unit is upon helping children to recognize the need for interdependence in carrying out the many duties necessary for a family to function, and the relevance of such interdependence in the occupational world. Role playing, brainstorming, puppet shows, group discussion and research, posters, bulletin boards and a variety of multi-media occupational aids are recommended.
Family Living

This unit's behavioral objective is "to identify the basic occupational skills used in different activities within the family". Building upon the student's recognition of the relevance of family interdependence to the world of work, this unit focuses upon the various skills needed to perform family tasks, and the occupational relationships of these skills. Use of filmstrips, films, parents as resource persons, pictures of family members at work, books, role playing and other appropriate materials and techniques are recommended.

Our Business Experience In The World of Work

Beginning with a behavioral objective of enabling students to "identify from first hand knowledge basic awareness of an occupational area as it relates to the world of work". The aim of this unit is to help students select, from the variety of occupations they are aware of, one area for more in-depth concentration. At least one field trip is recommended to one of the businesses chosen for in-depth study. Role playing of workers seen in the occupation or business visited is suggested, as well as small and total group discussion of data, insights, and attitudes generated by the activity. As with the other teaching units, a list of possible films, filmstrips, books and related resources is provided.

Contributions Toward My Education

The unit behavioral objective: "To simulate occupations of other people whose careers have made it possible to attend school". This unit utilizes the student's exposure to the many workers who contribute to his transportation to school, his well being and progress while at school, and those who offer materials, resources, or services needed for functioning as a member of the school's social environment. Multi-media aids, role playing, picture collection, and discussion of workers roles and duties are suggested.

Our Parents In The World of Work

"To compile a knowledgeable bibliography of parental occupations as it relates to the world of work." This is the behavioral objective that this unit is based upon. Previous units in this level have focused upon the interdependence of family members, and the different jobs family members do within the home setting. This unit moves the focus on the jobs parents do outside the home. Parents can be utilized here as resource persons to acquaint the class with the wide variety of occupations that they perform. Filmstrips on these occupations are recommended to deepen student understanding through a visual experience. A field trip to at least one parental occupation could be made, and role playing utilized to give students an opportunity to use all data gained in simulation of various parental occupational roles.

The level two units introduce the students to new and different kinds of workers in the community, those workers not in his family, or at school. This phase of career awareness involves job skills and their relationship to the total community.

**TEACHING UNITS - LEVEL TWO**

Away We Go

This unit focuses on careers in airplane, airline and airport occupations. The behavioral objective, for students "to acquire a knowledge of how important the airplane is in our everyday living, provides the framework for learning. The unit recommends use of books, films and filmstrips on air transportation, including a historical survey, famous flights, and the many changes that have taken place in the design and performance of aircraft. Resource persons and field trips are also listed as ways of involving children in understanding the many occupations that enable airports and air transportation systems to function. Role playing, small group research and discussions are also recommended to heighten student awareness of the ways in which airplane and air occupations affect the interdependence of people, communities, states and the nations of the world.

What Is A Farmer's Market?

This unit deals with agricultural occupations, including the entire spectrum of farming operations from planting and harvesting to selling to the public in a farmer's market. Agricultural research and development workers are also explored. Interest in Agri-business occupations are emphasized. A variety of techniques, methods, and resources are recommended for involving students in experiencing what agricultural jobs are really like.

Clothes of Today

This unit involves the student in some detail in the occupations required to operate the clothing industry from design, materials production, clothing manufacture, display and sales occupations. Also correlated are supportive occupations such as stock clerk, floor manager, pricer, payroll clerk, bookkeeper, etc. The unit begins by suggesting students brainstorm about why clothing is important to us, and then moves into a consideration of important clothing jobs.
through the use of class discussion, field trips, creation of a scrapbook and bulletin board, role playing, making simple clothing, a style show, and multi-media occupational resources.

Our Home

The behavioral objective for this unit is to incorporate into career awareness a more in-depth understanding of a particular occupational task or product. The business chosen is the building industry. By helping the students acquire a knowledge of all the many different types of workers required in a typical building project, such as building the houses in which we live, the unit relates these various jobs to the world in which the child and each of us live, then expands to focus on jobs in other types of building efforts.


Level three units are designed to increase occupational horizons from the immediate environment to the larger community. Comparing and contrasting occupations in the immediate area to those found in other communities, the units begin to provide the child with an opportunity to become aware of the encompassing nature of work.

Third grade units continue to emphasize the lower primary approach of total and small group activities under the teacher's leadership. More emphasis should be placed on individualized instruction, small group activities, with the teacher assuming leadership role in preparing students for the world of work.

TEACHING UNITS - LEVEL THREE

Choo Choo Train

This unit aims to provide the student with an awareness of the many services provided by the railroad, and the wide variety of jobs necessary for the provision by the railroad, and the wide variety of jobs necessary for the provision of those services. Beginning by focusing on the natural interest in trains and the railroad that almost all children have, the unit expands to encompass in greater depth the many workers who are responsible for the operations of the railroad system. Techniques recommended are use of railroad workers in the classroom as resource persons, trips to railroad yards or depots, individual and group research on types of trains,
different workers who earn a living working with trains and services provided by the railroad, and student role playing the various jobs of railroad workers. A number of activities are included that enable teachers to correlate academic subjects with the unit.

Workers Within Our Community

This unit's basis is the behavioral objective of "formulating a workable model of the various occupations within the community, correlating skilled and unskilled workers, and emphasizing the importance of training and education". This unit begins by utilizing the student's existing knowledge of community workers, with each student being asked to name at least two jobs they know within the community, and the people who perform them. It is then suggested that students plan and conduct a survey of the local work force, gathering information about the education, skills, salary and duties of the various workers surveyed. Development of the questions, conducting the survey and compiling information can be correlated with English, Math and Social Studies. Occupations tied in during the preparation of the questionnaire are: Typist, Stenographer, Printer, etc. Following data compilation, the unit also shows how students can develop an understanding of the interrelationships of the various community occupations.

The Staff of Life

"To utilize knowledge in developing an awareness of the bakery industry." With this as its behavioral objective, this level three teaching unit begins by stressing the importance of bread in our daily diets. The unit then moves to an examination of the many workers required to operate the entire bread producing cycle from the growing of grain through production at the bakery, and finally delivery to the store or customer. The unit recommends use of multi-media occupational resources, student research, use of resource persons, field trips, occupational simulation by performing baking operations in the classroom, selling bakery products at recess, etc. Subjects with which the unit can be correlated are English, Science, Writing, Art, and Health.

Supermarkets Serve People

The behavioral objective for this unit is "to construct a workable model of an occupation using working activities through role playing or dramatization". The unit begins with the teacher initiating a classroom discussion of why we depend upon other people for various types of services, including provision of the food we eat. Discussion then centers upon the services and products provided by the modern supermarket or community grocery store. Initial emphasis is upon
the different parts of the country food comes from, the jobs involved in preparing it for the store, including packaging and shipping, types of shipping transportation, stocking in the grocery store, and marketing to the public. All relevant jobs and occupations throughout these activities are stressed.


This unit moves the focus of occupational studies to job opportunities on a state level. This level also increasingly emphasizes the development of positive attitudes, appropriate to both personal growth and career choices, building upon experiences developed in preceding levels. By moving to new levels of experience, individual decision making abilities can be enhanced, and students can become more aware of the interdependence of occupations on a local and state wide basis.

TEACHING UNITS - LEVEL FOUR

Opportunities In Our State

This unit's behavioral objective is "to name the many occupations and job skills that are available to the student within the state". The unit's aim is to create an awareness of the many occupational possibilities within the student's state by focusing on major industries and the jobs that exist in each of those industries. The unit recommends use of books, filmstrips, records, tapes, resource persons from state occupations, class trips to see occupations in action, individual and small group research, role playing, and the creation of bulletin boards and displays depicting occupations and workers studied. Academic subjects that can be correlated are also indicated.

Black Gold

The behavioral objective of this unit is to enable students "to comprehend the vastness of our natural resources as related to the economic prosperity of the nation by focusing on the coal industry". This unit allows the student to learn about the whole array of mining occupations including those in both the labor and management segments of the industry. Included in the study is emphasis on the importance of coal as an energy source, and as the basis for many other industries and jobs. Academic correlation, tie-in of all relevant occupational, and use of a variety of occupational unit elements is recommended.
Rainbow of Color

This unit's behavioral objective is "to become aware of the glass industry in developing an awareness of an appreciation for the industry's vocational techniques as related to existing jobs within the state". The unit begins with a discussion of the many uses of glass in our everyday lives, and then moves into a consideration of the many occupations involved. The next step recommended is classroom visitation by someone from the glass industry. This is followed by a class tour of a glass making company, and observation of the many occupations in action. Data is also gathered about salaries, working conditions, skills and education needed, etc. Techniques for correlating academic subjects and for utilizing the full range of multi-media occupational resources are included.

Protective Services Provided By Our State

This unit involves the student in a consideration of the full range of protective services provided by law enforcement agencies at the local, state and federal levels, and the jobs required to provide these services. Included are recommendations for helping students develop an understanding of the duties, educational, skill and personality requirements, and financial rewards for police work. Ways of utilizing law enforcement personnel as resource persons, suggestions for field trips, and methods for utilizing multi-media occupational resources are included.


The units in grade five include instruction and experience that will enable students to develop positive attitudes toward work, identify and choose goals for themselves, and study occupational areas in which they are interested. The fifth level also moves the focus of study to various occupations on the national scale.

TEACHING UNITS - LEVEL FIVE

Individuality of Our Economic America

This unit seeks to aid the student in "examining the major industries and services within the United States as they relate to different geographic regions". This unit relates local and state occupations and industries to the
national occupational and economic scene, and encourages each student to select one occupational area for in-depth study in terms of job duties, education and skills required, salary, opportunities for advancement, and other relevant areas.

Wonderful World As Seen Through Television

This unit attempts "to illustrate the many different types of skills and careers used through the multi-media of communication". Building on the interest most students have in watching favorite television programs, this unit moves into a consideration of the different types of television shows that appeal to children. After stimulating interest, the unit recommends that the teacher move into an explanation of the many different workers and jobs required to make television programming possible. Use of books, filmstrips, films, records, and tapes is recommended, followed by a field trip to a T.V. station to see T.V. workers in action, and to learn first hand about their jobs, followed by a resource person in the classroom to answer in-depth questions formulated as a result of the field trip. The unit recommends that activities culminate in a student T.V. production, allowing students to simulate T.V. occupations that they have learned about.

Crafts of Appalachia

"To recognize a pursuit of excellence in the arts and the preservation of our cultural heritage as it relates to Appalachia." Although this unit's objective is related closely to crafts native to Appalachia, it can be adapted for use in studying craft occupations found in other states. The unit begins by cultivating student's natural interest in handmade craft objects, involves them in a study of this phase of the craft business, and then expands to consider related jobs in the production, business, marketing, administrative, and financial aspects of the field. Techniques recommended include resource persons, setting up a model craft cooperative to make and market student crafts, field trips, craft shows, etc. Related occupations are emphasized, and academic correlation suggested.

 Wonderful World of Money

In this unit students are provided with a basis for understanding our monetary system and how it functions as the basis of our economic system and the world of work. The unit gives particular emphasis to the many occupations involved in the operations of our nation's financial and economic structure, and the acquisition of important data about these jobs. Again, role playing, use of multi-media occupational resources, occupational simulation and field trips are recommended.

The sixth level of career awareness in the middle school is a continuation of investigation, interpretation, and basic experiences related to ideas, concepts, and values concerning individual awareness of the world of work on a world economic and social scale. The inter-relatedness of world economics, and the contributions made by many and varied jobs to the total well being of our world is the emphasis of the teaching units at this level.

TEACHING UNITS - LEVEL SIX

Communicating Through Letters

This unit deals with the postal service as a vehicle for communication between peoples throughout our nation and the world. With this as a foundation, the unit moves the student through a consideration of the many jobs that make postal service necessary, including an analysis of job duties, qualifications, training.

Careers In Music

"To utilize knowledge from world cultures as it relates to the social strata of our own country, state, and community." This behavioral objective underlies a unit that focuses on musical careers around the world. In doing so, the unit recommends that students take a look at the many different types of national music, musical instruments, and musicians in a variety of nations. Methods and activities recommended are research, use of records, films, filmstrips and other multi-media resources, role playing written reports, use of musicians as resource persons, field trips to see musical careers being performed, etc., culminating in a student musical production.

Around The World On An Occupational and Vocational Vacation

This unit takes students on a simulated around the world vacation in which the occupations in each country are studied. The unit recommends students select countries they want to focus on, write to travel agencies requesting information on these countries, obtain information on visas or passports needed, kinds of clothing appropriate to the climate of countries scheduled for visiting, medical steps that need to
be taken such as immunization, weather expectations, etc. Students are encouraged to discuss and study occupations involved in all these preparatory activities, as well as those to be found in the countries involved in the simulated visit.

Bussy Ants News, e.g. School Mascot News

This unit's behavioral objective is "to synthesize the multi-news medium into a workable newspaper operation". This unit takes students through an overview of the operations of a newspaper, and the occupations involved in those operations, by means of small group research, books, resource person from a newspaper, field trip to see a newspaper publishing company in operation and finally student publication of their own newspaper, with students assuming the various roles found in an actual newspaper office.

The authors developed this series of occupational knowledge tests for students in grades 1-6 because of the non-existence of standardized instruments for measuring student occupational knowledge in these grades. The tests are being used on a pre- and post-test basis, to compare the growth in occupational knowledge of students in the Lincoln County Career Education Project with a control group of non-project students. The tests increase in complexity and difficulty with each level, and ask students to answer questions dealing with identification of workers, linking workers with the tools of their trade, placing workers in the environmental setting in which their job is performed, and identifying the proper duties of occupational persons. The tests on each level will be discussed in detail. Each test has thus far been given once to each child in the Lincoln County Project, as well as to those not involved. Project staff are currently involved in tabulating and analyzing the results.

Occupational Awareness Test—Level One

This is a pictorial test involving a wide sampling of the occupational spectrum. The test includes four sections, each designed to focus on a particular phase of occupational awareness. Section I involves the identification of occupational figures. Section II is devoted to the selection of appropriate occupational tools. Section III is designed to test the ability of students to place workers in their proper environmental setting. Section IV relates to the students' knowledge of the occupational elements involved in the processes of home and family interaction.

Occupational Awareness Test—Level Two

The focus of the level two test is the community. The curriculum at this level will emphasize occupations that exist at the community level in other areas and in cultural settings more unfamiliar to the student. In view of this factor, this test again samples a wide range of community occupations. It is both pictorial and verbal and, like the level one test, involves the same general format as in that test's four sections.
Occupational Awareness Test - Level Three

This test is designed to measure the extent to which the level three occupational awareness curriculum has succeeded in increasing the level of student's occupational knowledge over the time span of a year. The test is entirely verbal at this level, and its four sections focus on essentially the same general areas as the level one and two tests, except for Section I, which involves the linking of occupational workers to the function that they perform.

Occupational Awareness Test - Level Four

This test is entirely verbal. Each portion of the test's two sections involves the linking of twenty-six occupational workers to their appropriate duty or job. The test is matching in nature with students being asked to match a list of workers on the left of the test page with the proper job from a list of duties on the right side of the answer sheet.

Occupational Awareness Test - Level Five

This test is designed to measure the extent to which the level five curriculum has succeeded in increasing the level of students occupational knowledge over the time span of a year. This test, like that at level four, involves the matching of occupational workers with their appropriate functions or duties. There are two sections of twenty-six questions each.

Occupational Awareness Test - Level Six

This test has two sections. The first is multiple choice, and in each question an occupational person is listed. Three job duties or functions are listed as alternatives. The task of the student is to pick the proper job from the available alternatives. Section II involves the matching of workers with their appropriate job or function.
MATERIALS DEVELOPED FOR USE IN IN-SERVICE TRAINING OF TEACHERS, COUNSELORS AND PRINCIPALS
One of the most urgent problems facing educators in Lincoln County is that of preparing the disadvantaged and below average high school student for productive participation in the world of work. An intensified program for providing such students with saleable skills and a knowledge of the attitudes and social skills requisite for effective integration into the job culture is presented in this article. This article outlines how others might adopt this approach to their own situations.

As a means of maximizing teacher involvement in the Career Education Program, the Lincoln County Career Development Staff has developed a series of questions which could be answered by teachers in taking an in-depth appraisal of the effectiveness of the units they use in their classrooms. The questions focus on teacher's perceptions in such areas as outstanding features of the units, changes recommended, factors contributing to success, etc. Hopefully, such a questionnaire can help teachers make significant contributions toward increasing the units impact on student's occupational horizons.

The Lincoln County Exemplary Project is designed to focus on the career education needs of individuals from the first grade through post high school. Project staff have already embarked upon a program designed to develop innovative solutions to the problems of disadvantaged adults whose unemployment is due to both a lack of saleable technical skills, and to social, cultural, and psychological deficiencies. The two pronged attack on these problems described by the authors is one model of what can be done in an economically underdeveloped area through careful planning and effective resource allocation. The article would be useful as a basis for school systems or teachers wanting to initiate such efforts.

This publication discusses the background and rationale for a career education program, describes the program developed for a comprehensive career education project in grades 1-12+ in the Lincoln County, West Virginia School System, and then moves into a discussion of strategies for the implementation of the program in terms of acceptance and support by teachers, administrators, students, parents, business, local government and civic groups, and in planning and implementing initial program training and orientation.


Many worthwhile innovative programs fail because of inadequate attention to the human relations or process phase of the project. Although technical and informational components are often highly functional and relevant, process problems may intervene to minimize the potential effectiveness of the effort. In order to avoid this barrier to program implementation the staff of the Lincoln County Exemplary Project organized a work long workshop to initiate the county's new Career Education Program. The workshop, involving teachers, principals, and central project staff, had a dual emphasis designed to focus on both the process and task elements of program implementation and change. This article outlines the strategy employed in designing and conducting the workshop.


This series of twelve questions was answered by the Lincoln County Project Staff after being nominated by the Center for Occupational Education, North Carolina State, for study as one of the nations exemplary projects in career education. The answers provide a good over-view of the Lincoln County Project and would be useful for providing teachers preparing to enter such a program with valuable background data.
EVALUATION OF THE LINCOLN COUNTY
EXEMPLARY PROJECT IN CAREER EDUCATION

The general question in this study involves the acquisition of knowledge by students in grades one through six upon which future decisions can be based. The students studied are in Lincoln County, where a new exemplary project in career education is being implemented. The specific research question asked in this study is as follows:

Will the student who has been provided with experiences in the Lincoln County Exemplary Program possess more knowledge about occupations than the student who has not been provided with these experiences. This proposal outlines the full nature of this research question, defines the research objectives, and sets forth methods and procedures to be followed, instruments to be used and specific design.