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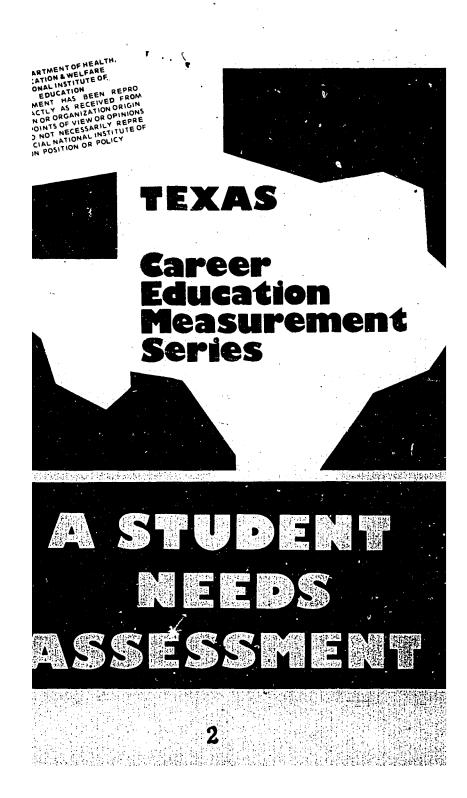
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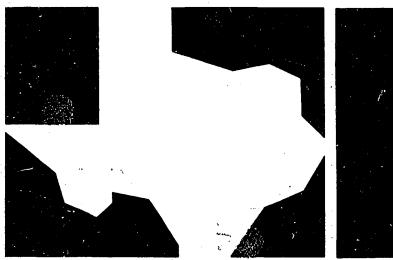
#### ABSTRACT

A statewide assessment in career education was made to: (1) Determine how Texas students stand in relation to basic skills, knowledge, and competencies in career education, and (2) provide decision makers with information about student performance in career education that will assist curriculum planning and development efforts at the local, regional, and state levels. The Texas Career Education Measurement Series (CEMS) was used in testing ninth and twelfth grade students. It was assumed that 75% of minth grade students and 90% of twelfth grade students should be able to master basic learner outcomes in the areas of career education. In the nine general categories of career education outcomes measured by the CEMS, both twelfth and ninth grade students ranked highest (rank 1) in self-investigation and evaluation for career success and lowest (rank 9) in career and occupational information. Results of the statewide assessment provide objective information which is useful for suggesting areas for educational improvements. The document also includes a description of CEMS, (which consists of a survey test and 16 category tests for use in Grades 7-12). The appendix contains tables listing the nine career education categories with their 26 sub-categories and the outcome based objectives for each. (TA)

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## A STUDENT NEEDS ASSESSMENT\_\_\_\_

#### CONTENTS:

esign for Action	2
he Measurement System	3
ata Collection	6
esults	6
mplications	1
rom Assessment to Instruction	2
the Future of CEMS	2
appendix	5

# DIVISION OF ASSESSMENT AND EVALUATION TEXAS EDUCATION AGENCY 201 EAST ELEVENTH STREET AUSTIN, TEXAS 78701 September, 1976

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COMPLIANCE WITH TITLE VI, CIVIL RIGHTS ACT OF 1964 AND THE MODIFIED COURT ORDER, CIVIL ACTION 5281, FEDERAL DISTRICT COURT, EASTERN DISTRICT OF TEXAS. TYLER DIVISION

Reviews of local education agencies pertaining to compliance with Title VI Civil Rights Act of 1964 and with specific requirements of the Modified Court Order, Civil Action No. 5281, Federal District Court, Eastern District of Texas, Tyler Division are conducted periodically by staff representatives of the Texas Education Agency. These reviews cover at least the following policies and practices:

- (1) acceptance policies on student transfers from other school districts;
- (2) operation of school bus routes or runs on a non-segregated basis:
- (3) non-discrimination in extracurricular activities and the use of school facilities;
- (4) non-discriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning or dismissing of faculty and staff members who work with children;
- (5) enrollment and assignment of students without discrimination on the ground of race, color or national origin;
- (6) non-discriminatory practices relating to the use of a student's first language; and
- (7) evidence of published procedures for hearing complaints and grievances.

In addition to conducting reviews, the Texas Education Agency staff representatives check complaints of discrimination made by a citizen or citizens residing in a school district where it is alleged discriminatory practices have or are occurring.

Where a violation of Title VI of the Civil Rights Act is found, the findings are reported to the Office for Civil Rights, Department of Health, Education and Welfare.

If there be a direct violation of the Court Order in Civil Action No. 5281 that cannot be cleared through negotiation, the sanctions required by the Court Order are applied.





#### INTRODUCTION

In 1975-76, the Texas Education Agency conducted a student needs assessment in career education, an area selected by the State Board of Education as a top priority of educational concern. The purpose of the needs assessment was to determine how Texas students stand in relation to basic skills, knowledge, and competencies in career education.

This report describes the results of the statewide assessment in career education. It is being issued to all school districts, regional education service centers, colleges and universities, state departments of education, legislators and state officials, and other interested educators. Its purpose is to provide decision makers with information about student performance in career education that will assist curriculum planning and development efforts at the local, regional, and state levels.



#### **DESIGN FOR ACTION**

#### What Should be Assessed?

An important characteristic of a student needs assessment is that it is always done in relation to specific goals or objectives. Once these student learning objectives have been established, measurements of student performance can then be taken and comparisons can be made between "what should be" and "what actually exists." However, when the Texas Education Agency initiated an assessment in career education, there were no clear definitions of what student development should be in terms of career education. It was therefore necessary to develop a set of student learning objectives for career education.

Under the direction of a steering committee, appointed by the Agency, a statewide survey of students, parents, educators, and representatives from business and industry was conducted to determine what Texans believed students leaving school should accomplish in career education. Participants in the survey identified 177 characteristics as basic or essential to student development. These basic learner outcomes were then used as the "what should be" in conducting a statewide student needs assessment in career education.

#### Who Should be Assessed?

Determining the student population to be assessed was a major decision in the statewide assessment. Since the basic learner outcomes define career education in terms of the attitudes, knowledge and skills expected of 17-year-old students, performance at the twelfth grade level was assessed. Ninth grade students were also included in the sample to determine the amount of progress being made toward mastery of the basic learner outcomes and to give teachers diagnostic information useful for instructional planning.

A representative sample of approximately 20,000 ninth grade students and 6,500 twelfth grade students was randomly selected to participate in the statewide assessment. The sample included 1,136 classrooms from 396 school districts in Texas.

#### What Assessment Method Should be Used?

An investigation of available career education measurement instruments was initiated to determine how well these instruments measured student performance in relation to the basic learner outcomes. Because none of the instruments provided adequate coverage of the learner outcomes, it was evident that a new test would have to be developed. Through the cooperative efforts of the Texas Education Agency, Westinghouse Learning Corporation, and the Partners in Career Education Project, sponsored by the Dallas and Fort Worth Independent School Districts and Education Service Center Regions X and XI, the Career Education Measurement Series (CEMS) was developed and was used as the instrument for the statewide assessment in career education.

#### THE MEASUREMENT SYSTEM

#### Nature of the System

The Texas Career Education Measurement Series, generally referred to as CEMS, is a diagnostic measurement system designed to support instruction in career education. CEMS consists of 17 instruments — a survey test and 16 category tests — with Administrator's Manual and User's Guide. Also included in the CEMS system are handscoring directions for each of the 17 instruments and an instructional handbook of suggested learning activities and resources.

The CEMS measurement instruments, appropriate for use in grades seven through twelve, are objective-based and can be used to determine the individual student's progress toward mastery of the basic learner outcomes for career education.

The measurement instruments begin with test items. Two or more are used to measure each basic learner outcome. Some items are cognitive in nature. They may require a student to give specific facts relating to sources of job information or to identify good interview practices. Some items deal with affective areas. Answers to these questions may require an attitudinal response.

At the second level in the system are the basic learner outcomes. At this time test items have been developed for 63 learner outcomes. Some of the learner outcomes covered in the tests are simple objective statements. For example:

Given a sample employment application, the student should be able to neatly and accurately fill in all blanks.

A test item for this kind of outcome might ask the students to supply:

- A. Age and birth date
- B. Social Security Number
- C. Work experience
- Names and addresses of references

Other learner outcomes covered in the test deal with student attitudes. For example:

The student should be able to give examples of individual attitudes toward work.

An item used to measure this outcome might ask the student to distinguish between a fact or an attitude about work.

The third level of the measurement system groups the 63 learner outcomes into 26 sub-categories. An example of a sub-category grouping is "Understanding Self-Concept." The outcomes grouped under this sub-category are:

- determining the importance of recognizing personal faults and limitations,
- recognizing ways a person's self-concept influences his/her ability to succeed.

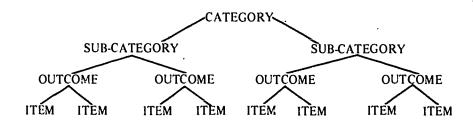
The nine categories represent the broadest generalization of the system and provide a way to communicate, overall, the status of student performance in the areas of career education. These categories are:

- Career Planning and Decision Making
- Career and Occupational Information
- Job Acquisition and Retention
- Attitudes and Appreciation for Career Success



- Skills in Human Relationships for Careers
- Self-Investigation and Evaluation for Career Success
- Personal/Work/Societal Responsibilities
- Economic Factors Influencing Career Opportunity
- Education/Career Opportunity Relationships

The figure below illustrates the CEMS hierarchy:



A complete list of all categories, sub-categories and outcomes in the measurement system is provided in the appendix.

#### The Survey Test

The survey test is designed to serve as a screening device to diagnose probable areas of strength and weakness in either individuals or groups of students and to identify areas where further testing is appropriate. It consists of 45 items which represent the 26 sub-categories.

#### The Category Tests

The category tests provide diagnostic information about student development in terms of the behavior described by the basic learner outcomes. There are 16 booklets representing the nine career education categories. The number of items in each category test ranges from 9 to 22 items.

#### DATA COLLECTION

In November and December of 1975, the CEMS survey test was administered to 20,073 ninth grade and 6,593 twelfth grade students. Prior to test administration, a pretest workshop was conducted for personnel in participating school districts.

Following test administration, the student answer sheets were scored using a computer program provided by Westinghouse Learning Corporation. In order to meet the pertormance criterion on the survey test, a student had to answer correctly 6C percent of the total items for each sub-category. After the tests had been scored, results were furnished to each participating classroom showing individual student and group performance at the sub-category level on the survey test. In addition, summary reports of student performance were furnished at the campus and regional levels. A series of posttest workshops was held to explain to personnel in participating districts how to interpret and use the test results.

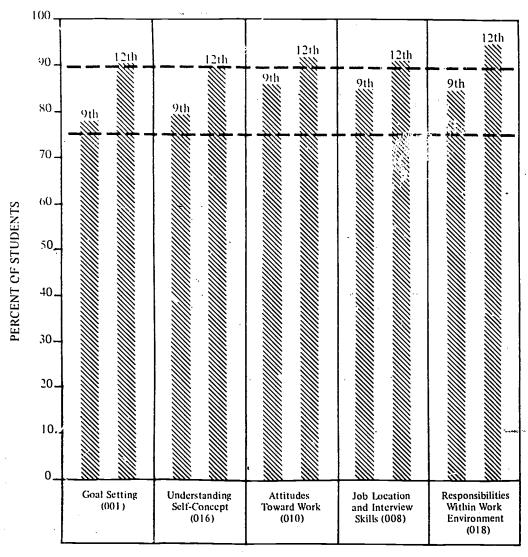
#### RESULTS

Based on the compilation and analysis of statewide results, a Report of the Assessment in Career Education has been developed by the Texas Education Agency. The report describes, in detail, all information regarding student results, including how students performed on each item. Following is a summary of the results of the statewide assessment in career education.

#### Sub-Categories of Highest Performance

Because the learner outcomes for career education were identified as "basic" for all 17-year-old Texas students, it was assumed, for this assessment, that 90 percent of the twelfth grade students should be able to master these learner outcomes. Similarly, it was assumed that because students are younger and have fewer experiences at the ninth grade, 75 percent of the ninth grade students should display attainment of the outcomes. As shown in Figure 1, there were five sub-categories for which at least 90 percent of the twelfth graders and 75 percent of the ninth graders met the performance criterion. Because students performed well in these five sub-categories, a concentration of special programs and resources would not be required in these areas.

Figure 1
SUB-CATEGORIES OF HIGHEST PERFORMANCE



**SUB-CATEGORIES** 

#### Sub-Categories of Lowest Performance

The nine sub-categories of lowest performance are shown in Figure 2. These are the sub-categories where less than 75 percent of the twelfth grade students met the performance criterion. These sub-categories should be given priority attention since the twelfth graders did not meet the 75 percent expectation level that was established for the ninth grade.

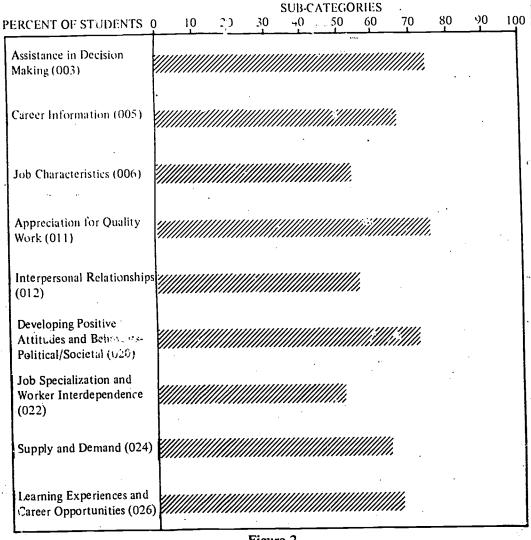


Figure 2
PRIORITY STUDENT NEEDS

#### Performance By Sex and Ethnicity

Assessment results were also analyzed to determine if there were differences in the performance of students of varying ethnicity and sex. In studying the results of the selected groups, the following trends in performance were observed.

- The percentage of girls meeting the performance criterion for a sub-category exceeded the percentage of boys by at least 5 percent on 11 sub-categories.
- On only two sub-categories did the percentage of boys meeting the performance criterion for the sub-category exceed the percentage of girls.
- The percentage of "others" (primarily Anglo) meeting the performance criterion for the sub-categories exceeded the percentage of Mexican Americans at the ninth grade level by a range of 10 to 27 percent.
- The percentage of "others" (primarily Anglo) meeting the performance criterion for the sub-categories exceeded the percentage of blacks at the ninth grade level by a range of 12 to 37 percent.
- The percentage of "Mexican Americans" meeting the performance criterion for the sub-categories exceeded the percentage of blacks at the ninth grade level by a range of 2 to 11 percent.
- The range of differences in student performance among the varying ethnic groups was less noticeable at the twelfth grade level for all 26 sub-categories.



### Figure 3 CATEGORY PERFORMANCE

Category	Rank Twelfth Grade	Rank Ninth Grade
Self-Investigation and Evaluation for Career Success		i
Personal/Work/Societal Responsibilities	2	3
Attitudes and Appreciation for Career Success	3	2
Career Planning and Decision Making	4	5
Job Acquisition and Retention Skills	5	4 .
Skills in Human Relationships for Careers	6	6
Education/Career Opportunity Relationships	7	7
Economic Factors Influencing Career Opportunities	8	8
Career and Occupational Information	9	9
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#### **Overall Student Performance**

Student performance has been reported at the sub-category level. These 26 sub-categories are grouped under nine general categories of career education. In considering the overall performance of Texas students at the category level, Figure 3 shows how ninth and twelfth graders performed in relation to these categories. The categories are ranked from highest student performance (rank 1) to lowest performance (rank 9).

#### **IMPLICATIONS**

Results of the statewide assessment provide objective information which is useful for suggesting areas for educational improvements. As a result of conducting the assessment and analyzing the data, there are several implications for improving education which should be considered:

- Those sub-categories in which the performance criterion was not met be at least 90 percent of the twc!fth grade students are, by definition, areas of student need. Future program development efforts at the state, regional, and local levels should be directed toward reducing or eliminating these identified student needs. *Priority* attention should be given to those sub-categories in which less than 75 percent of the twelfth graders displayed attainment.
- The assessment data have indicated areas of strength and weakness in student performance. Education service centers and school districts should examine existing career education programs in light of the assessment results to determine which learner outcomes are being emphasized and accomplished in the programs and which outcomes are not being mastered by students.
- As a result of the statewide assessment, school districts now have measurement instruments to use in the implementation and continuous renewal of an instructional system for career education. School districts should use the assessment results and the measurement instruments to gain more information to further their own data collection capabilities.
- A large number of teachers, counselors, and principals who responded to an evaluation questionnaire indicated that assessment results could best be used for program planning in the areas of vocational education and counseling. Because a limited number of students are affected by these programs, efforts should be continued to infuse career education concepts into the entire instructional program.





#### FROM ASSESSMENT TO INSTRUCTION

Information from the statewide assessment will assist curriculum planning and development efforts at the local, regional, and state level. In addition, the Career Education Measurement Series is available for school districts to use in the implementation of an instructional system for career education.

The following example shows how the measurement instruments can be used for individual student diagnosis:

Jan Reed, a ninth grader, has taken the survey test. The results from the test show that Jan did not answer correctly those items for the sub-category, *Understanding Self-Concept*. This indicates that Jan should now take Cr. egory Test 6-1 which contains several items dealing with *Understanding Self-Concept*. By providing information at the learner outcome level, the results of the category test will confirm, or define more specifically, Jan's area of instructional need.

To be used in conjunction with the measurement instruments in another element of CEMS, the handbook of Selected Activities and Resources. This handbook is a collection of teaching activities and instructional approaches designed to provide classroom teachers with ideas and resources for helping students achieve the 63 basic learner outcomes included in CEMS. For example:

Jan's test results indicated an instructional need in the area of "Understanding Self-Concept." It would then be appropriate for Jan's teacher to select a learning module from the handbook or develop one which addresses the area of self-concept. Following instruction, the appropriate category test can be used to determine if Jan has mastered the basic learner outcomes in the area of self-concept.

#### THE FUTURE OF CEMS

The primary purpose for developing the measurement series has been to provide a system for school districts to use that will support career education instruction.

The Career Education Measurement Series, with its various components, should be regarded as a systematic process which will assist school districts in helping students acquire the basic concepts of career education. All CEMS materials are available to school districts in Texas. The 20 regional education service centers are the repositories for these materials. Information about the measurement series can be obtained by contacting regional education service center personnel.

The following reports contain additional information about the 1975-76 Texas Statewide Assessment in Career Education:

- The Report of the Asso, whent in Career Education is a comprehensive record of the assessment and presents detailed student performance results.
- From Assessment to Instruction, a slide/tape presentation, provides an overview of the statewide assessment and emphasizes the use of assessment results for instructional planning.
- CEMS: From Assessment to Instruction, a one-sheet brochure, describes the different components of the Career Education Measurement Series.

For copies of the reports or additional information about the statewide assessment, please contact:

Division of Assessment and Evaluation
Texas Education Agency
201 East Eleventh Street
Austin, Texas 78701
(512) 475-2066



#### APPENDIX

CATEGORY 1: Career Planning and Decision Making

Sub-Category Number & Title	Outcome Number and Outcome Based Objective	
001 Goal Setting	1:03	The student should be able to identify factors that contribute to personal job satisfaction.
	1:04	The student should be able to determine the importance of matching personal goals with a career choice.
002 Lifestyle	1:12	The student should be able to identify factors which influence a person's lifestyle.
003 Assistance in Decision Making	1:02	The student should be able to apply a decision-making process to solving problems related to career choice.
	1:07	The student should be able to use his/her own resourcefulness to solve career-related problems.

CATEGORY 2: Career and Occupational Information

	Sub-Category Number & Title	Oute	ome Number and Outcome Based Objective
004	Occupational Supply and Demand	2:02	The student should be able to investigate the supply and demand for a particular occupation prior to making a career choice.
005	Career Information	2:01	The student should be able to identify the benefits derived from talking with qualified people working in areas of interest to him/her.
	-	2:05	The student should be able to locate and use appropriate sources of information that will aid a person in making a career choice.
006	. Job Characteristics .	2:10	The student should be able to identify various jobs that require the same skills.
007	Job Characteristics and Individual Needs and Interests	2:07	The student should be able to match his/her individual needs and interests with his/her career choice.



CATEGORY 3: Job Acquisition and Retention Skills

Sub-Category Number & Title	Out	come Number and Outcome Based Objective
008 Job Location and Interview Skills	3:01	The student should be able to identify the various parts of a job application form and select from several samples the one form which has been properly completed.
	3:02	The student should be able to distinguish between appropriate and inappropriate interview behaviors.
009 Job Retention Skills and Understandings	3:07	The student should be able to give examples of ways to improve one's chances for personal job success.





CATEGORY 4: Attitudes and Appreciation for Career Success

Sub-Category Number & Title	Outcome Number and Outcome Based Objective	
010 Attitudes Toward Work	4:03	The student should be able to give examples of individual attitudes toward work and identify factors that influence a person's attitude toward work.
	4:0:5	The student should be able to indicate the advantages of completing a task.
	4:07	The student should be able to identify examples of personal satisfaction through one's own accomplishments and recognize that satisfaction may or may not be the same for all individuals.
	4:21	The student should be able to demonstrate, as an employee, compliance with reasonable decisions made by other persons with legitimate authority.
011 Appreciation for Quality Work	4:01	The student should be able to detect quality work in relation to a task or job and indicate the advantages of quality work performance.
	4:08	The student should be able to give examples of an individual taking pride in his/her work and work products.

CATEGORY 5: Skills in Human Relationships for Careers

Sub-Category Number & Title	Outco	ome Number and Outcome Based Objective
012 Interpersonal Relationships Skills	5:06	The student should be able to identify examples of a person exhibiting "good" manners on the job or in social settings and indicate the importance of doing so.
	5:16	The student should be able to indicate the benefits of and necessity for being sensitive toward others.
	5:18	The student should be able to recognize instances in his/her life when he/she will have to make compromises.
013 Fluman Relation- ships Skills	5:10	The student should be able to recognize the consequences of prejudice among different races or ethnic groups as it affects the behavior of individuals
	5:11	The student should be able to identify factors which contribute to prejudice.
014 Group Dynamics Skills	5:04	The student should be able to identify ways a person can effectively interact with other people as a team member.
	5:09	The student should be able to identify examples of respectful behavior among people of different races or ethnic origins and indicate the results of such behavior.
·	5:12	The student should be able to identify the advantages and disadvantages of being a leader and/or follower.
	5:22	The student should be able to identify the most effective means of communication for different situations.
	5:24	The student should be able to indicate the benefits of communicating, projecting thoughts, and/or expressing one's feelings.



CATEGORY 6: Self-Investigation and Evaluation for Career Success

Sub-Category Number & Title	Outc	ome Number and Outcome Based Objective
015 Personal Adjustment and Problem Solving	6:01	The student should be aware of and should be able to select the appropriate assistance from school, public, and/or private counselors on problems about school, home, career choice career requirements, lifestyles and/or getting along with other people.
	6:16	The student should be able to indicate situations in which a person might be required to make adjustments.
016 Understanding Self-Concept	6:05	The student should be able to determine the importance of recognizing personal faults or limitations.
	6:10	The student should be able to recognize ways a person's self-concept influences his/her ability to succeed.
017. Career Interests and Capabilities	6:04	The student should be able to identify factors which will influence a person's career options such as personal characteristics, training requirements, finances, and parental attitudes.



CATEGORY 7: Personal/Work/Societal Responsibilities

Sub-Category Number & Title	Outc	ome Number and Outcome Based Objective
018 Responsibilities Within the Work Environment	7:02	The student should be able to identify appropriate behavior for working with or without supervision and for working independently or with others.
	7:11	The student should be able to identify responsibilities which one would have to one-self and to fellow workers when performing a task or job.
	7:20	The student should be able to identify good safety habits which would be applicable on the job and at home.
	7:21	The student should be able to indicate the benefits of caring for and conserving the use of equipment and materials on the job.
	7:23	The student should be able to indicate reasons for maintaining good health in relation to job performance.
019 Responsibilities and Rights Derived from Political/Societal	7:04	The student should be able to identify the consequences of a person not working.
Environment	7:05	The student should be able to identify rights that are granted to us by our social and political institutions including matters such as property ownership and freedom of speech.
	7:07	The student should be able to identify ways our society is responsible for supporting certain individuals such as orphans and the aged.



		7:08	The student should be able to identify services such as education, police protection, and highway maintenance that are provided by city, county, state and/or federal governments and paid for with tax money.
020	Developing Positive Attitudes and Behaviors for Participation in the Political/Societal Environment	7:13	The student should be able to indicate situations which reflect a positive attitude or respect toward the United States and participation in the American political and economic systems.
	Environment	7;16	The student should be able to conclude that participation in the political process can make the system more responsive to its populace.
		77:22	The student should be able to identify ways to conserve and reasons for conserving environmental and human resources.



CATEGORY 8: Economic Factors Influencing Career Opportunity

Sub-Category Number & Title	Oute	ome Number and Outcome Based Objective
021 Effects of Technology	8:02	The student should be able to identify ways technology can affect a person's work and lifestyle.
	8:04	The student should be able to identify situations in which technology necessitates retraining of the labor force.
022 Job Specialization and Worker Inter- dependence	8:31	The student should be able to identify the results of dependence on other people, businesses and communities for our basic needs.
023 Use of Money and Resources	8:08	The student should be able to define interest and indicate why it is a necessary charge for using other people's money.
	8:10	The student should be able to determine that the wages a person receives may be dependent upon one's time and effort.
	8:11	The student should be able to distinguish between gross income, net income, and income taxes.
	8:20	The student should be able to recognize that some decisions a person makes may require giving up doing or buying something else with one's time or money.
·	8:21	The student should be able to interpret a household budget involving income and expenditures.



024 Supply and Demand-	8:16	The student should be able to indicate the relationship among resources, goods and services.
<b></b>	8:17	The student should be able to identify factors that affect the supply and demand of items or services.
	8:26	The student should be able to indicate the effects of scarcity of resources.
	8:27	The student should be able to identify the effects of consumer influence on the kinds and numbers of goods and services that are produced.

CATEGORY 9: Education/Career Opportunity Relationships

Total of the state		
Sub-Category Number & Title	Ou	tcome Number and Outcome Based Objective
025 Relationships of Education (formal or informal) to Career Opportunity	9:01	The student should be able to give examples of how the understandings of specific knowledge is a means of achieving a particular career goal.
	9:04	The student should be able to identify courses which are available in school that offer specialized training programs for full-time employment.
026 Relationships of Learning Experiences (in school or out) to Career Opportunity	9:02	The student should be able to identify learning experiences in school which will improve his/her ability to follow a particular career direction or enable him/her to make necessary career adjustments.
	9:09	The student should be able to indicate reasons for asking questions when he/she needs information.
	9:15	The student should be able to determine that by listening and reading a person can be exposed to and/or absorb the thoughts and knowledge of others.

