

DOCUMENT RESUME

ED 107 769

CE 003 844

AUTHOR Winnen, Charlotte; Strenger, John
 TITLE Occupational Computer System Adapted for Science for
 the Junior High Student.
 INSTITUTION White Bear Lake Independent School District 624,
 Minn.
 PUB DATE [73]
 NOTE 18p.; For related documents, see CE 003 833-43 and CE
 003 845-9

EDRS PRICE MF-\$0.76 HC-\$1.58 PLUS POSTAGE
 DESCRIPTORS *Career Education; *Computer Assisted Instruction;
 Computer Programs; Computer Storage Devices;
 Information Systems; Information Utilization;
 Instructional Materials; Junior High Schools;
 *Occupational Clusters; *Science Careers; Science
 Curriculum; *Science Units; Teacher Developed
 Materials

IDENTIFIERS Interactive Lrng Syst Guidance Occupl Info File;
 Minnesota; TIES Computer System; White Bear Lake

ABSTRACT

The guide, part of an exemplary career education program, contains a science unit for junior high school students which is designed to help students obtain information on science occupations found in the Interactive Learning System-Guidance-Occupational Information File of the TIES Computer System in Minneapolis-St. Paul. The guide lists goals and objectives and provides operating procedures for obtaining from the computer either the job description, worker requirements, and related jobs, or the occupational characteristics for any requested occupation. It also provides an eight-page list of science-related occupations with their appropriate job code numbers. It concludes with a sample computer tape printout. (JR)

 * Documents acquired by ERIC include many informal unpublished *
 * materials not available from other sources. ERIC makes every effort *
 * to obtain the best copy available. nevertheless, items of marginal *
 * reproducibility are often encountered and this affects the quality *
 * of the microfiche and hardcopy reproductions ERIC makes available *
 * via the ERIC Document Reproduction Service (EDRS). EDRS is not *
 * responsible for the quality of the original document. Reproductions *
 * supplied by EDRS are the best that can be made from the original. *

ED107769

CAREER EDUCATION

OCCUPATIONAL COMPUTER SYSTEM

ADAPTED FOR

SCIENCE

A CAREER DEVELOPMENTAL PROGRAM

CAREER AWARENESS
SELF AWARENESS
 APPRECIATION & ATTITUDES
DECISION MAKING
 SKILL AWARENESS, BEGINNING COMPETENCE
ECONOMIC AWARENESS
EMPLOYABILITY SKILLS
EDUCATIONAL AWARENESS



White Bear Lake
Public Schools

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT THE NATIONAL INSTITUTE OF EDUCATION.

ERIC
Full Text Provided by ERIC

ED003075

ED107769

OCCUPATIONAL COMPUTER SYSTEM

ADAPTED FOR

SCIENCE

FOR THE

JUNIOR HIGH STUDENT

by

Charlotte Winnen

John Strenger

CAREER DEVELOPMENT

Grades 7 - 9

An Exemplary Program

in

Career Education

Funded under the Provisions of Part D
of the Vocational Education Amendment of 1968
for

Independent School District #624
White Bear Lake, Minnesota

Ernest M. Thomsen, Superintendent
Ron Johnstone, Director Vocational Education

1972 - 73

TO THE TEACHER:

This project is designed for use with TIES Computer System within the Metropolitan Twin City Area. It is an efficient means of obtaining information on career occupations found in the Interactive Learning System-Guidance-Occupational Information File. Although this project was specifically designed to obtain information in science careers, it can easily be adapted for any subject area.

By following the simplified entry format, students are then able to gain information by typing the letter "P" plus the occupational code number. The computer replies with a job description, worker requirements, and related jobs. By typing the letter "I" plus the occupational code number the computer itemizes all the occupational characteristics which are true for the selected occupation. The occupational characteristics are keyed by number and their key may be found in the "Occupational Information Study Booklet" found within this unit. Following is a list of the major groupings for the itemized characteristics.

1. Levels of Formal Education Preferred or Required by the Employer
2. Training other than Formal Education
3. Special Vocational Training
4. Other Qualifications Which May be Required
5. Methods of Entering Field
6. Advancement
7. Worker Attitudes Desirable for Occupation
8. Work Activities which Describe the Occupation
9. Tool and Machine Skills
10. Relationships to People
11. Physical Demands
12. Working Conditions
13. Areas of Work Where People in an Occupation May be Employed
14. Employment Outlook
15. Earnings Range - Salary

* The occupational code numbers were selected from a list of occupations which is obtainable from TIES.

OCCUPATIONAL COMPUTER SYSTEM ADAPTED FOR SCIENCE

ABSTRACT

Occupational Computer System adapted for science for Independent School District #624. Charlotte Winnen and John Strenger - Science teachers.

After learning that TIES had a time-share Occupational Information Program we decided that this program would be of great value to us in our science classes. However, we discovered it was very difficult to obtain the programmed information as instructed from the "Study Booklet" provided by TIES. As a result, we have developed a unit which allows the student to enter and leave the computer program effeciently, yet allowing him to obtain information about the science occupations he is interested in.

MAJOR OBJECTIVES:

- 1) Students will be able to use the adapted program for exploring various science occupations.
- 2) Students will be able to properly use the computer as a communication media in exploring science occupations..
- 3) The students will be able to use the unit in conjunction with an elective choice in our eighth grade science program.
- 4) The unit will be available for all students to use on an individual basis.

STUDENT GOALS FOR CAREER EDUCATION

- 1) Awareness of career specialization in society.
- 2) Awareness of relationship between occupational requirements and educational development.
- 3) Exploration of interests in work roles related to science careers.
- 4) Exploration of career clusters in relationship to personal interest.
- 5) Preparation for identification of immediate steps and cost in terms of time and education requirements of science careers.
- 6) Exploration of benefits in science career cluster choice.
- 7) Awareness that personal interests will affect personal career choices.
- 8) Exploration of employability readiness based on skills and knowledge and attitudes of entry level jobs.

STUDENT OBJECTIVES

By following the procedure given below, each student will be able to:

- 1) Enter into computer
- 2) Enter into TIES computer: "Interactive Learning System-Occupational Information Program."
- 3) Obtain:
 - a) job description
 - b) job requirements
 - c) list of job qualifications
 - d) related occupations
- 4) Successfully "Q" leave computer system.

EXAMPLE: Computer tape can be found at the end of this unit.

LESSON I: ENTERING COMPUTER SYSTEM

- 1) Dial 636-4950, wait for tone.
 - 2) Turn power to "ON".
 - 3) Place telephone receiver into carrier.
 - 4) Turn teletype knob (bottom-front) to "Line" position.
 - 5) Type any 2 numbers and push RETURN button. Computer will type a response of "PLEASE LOG IN."
-

LESSON II: ENTERING INTO TIES COMPUTER "INTERACTIVE LEARNING SYSTEM-
OCCUPATIONAL INFORMATION PROGRAM."

<u>WHAT YOU SHOULD DO OR TYPE</u>	<u>COMPUTER RESPONSE</u>
1. Type: HEL - S530, then hold down CTRL button while you type WBLK. Release CTRL button and push RETURN button.	1. "READY"
2. Type: GET - *GIS and push RETURN button	2. (no response)
3. Type: RUN and push "RETURN"	3. ... "WHICH FILE"
4. Type: OCCU and push RETURN button.	4. "OCCUPATIONAL INFORMATION READY?"

LESSON III: OBTAINING JOB DESCRIPTIONS, JOB REQUIREMENTS, LIST OF JOB QUALIFICATIONS, AND RELATED OCCUPATIONS.

WHAT TO DO OR TYPE

COMPUTER RESPONSE

- | | |
|---|--|
| 1. Type: P (plus selected occupational number found in adjoining catalogue) and push RETURN | 1. Gives: job description
job requirements.
related jobs. |
| 2. Type: I, (plus an occupational number found in adjoining catalogue) and push RETURN | 2. Gives: List of job qualifications by code numbers found in attached listing |
-

LESSON IV: PROCEDURE FOR LEAVING THE COMPUTER

WHAT TO DO OR TYPE

COMPUTER RESPONSE

- | | |
|--|------------------------|
| 1. Type: Q and push RETURN | 1."WHICH FILE" |
| 2. Type: NONE and push RETURN | 2.END |
| 3. Type: ,BYE and push RETURN | 3. Gives terminal time |
| 4. Green light on telephone carrier will go off. | |
| 5. Replace receiver onto the telephone. | |
| 6. Turn teletype knob to "OFF" position. | |

OCCUPATIONS RELATED TO SCIENCE

NOTE: The number before the occupation is the JOB CODE number.

OCCUPATIONS IN ARCHITECTURE AND
ENGINEERING
(D.O.T. FAMILY # 00-01)

34 Aircraft Designer	4148 Engineer, Structural
67 Architect	508 Flight Analyst
68 Architect, Marine	527 Foundry Metallurgist
277 Community Planner	527 Highway Landscape Architect
366 Director, Physical Testing	657 Laboratory Assistant, Metallurgical
367 Director, Quality Control	661 Landscape Architect
381 Draftsman, Aeronautical	751 Metallurgist, Extractive
382 Draftsman, Architectural	752 Metallurgist, Physical
385 Draftsman, General	1116 Specification Writer, Airplanes
386 Draftsman, Landscape	1117 Specification Writer, Engineering
387 Draftsman, Map	1113 Space Analyst
388 Draftsman, Marine	1160 Surveyor
390 Draftsman, Structural	1161 Surveyor, Geodetic
19 Engineer, Aeronautical	1162 Surveyor, Marine
22 Engineer, Agricultural	1163 Surveyor, Mine
46 Engineer, Airport	20 Technician, Aeronautical Eng.
221 Engineer, Chemical	23 Technician, Agricultural Eng.
243 Engineer, Civil	244 Technician, Civil Engineering
269 Engineer, Combustion	419 Technician, Electrical
291 Engineer, Construction	614 Technician, Industrial Eng.
414 Engineer, Electrical	740 Technician, Mechanical Eng.
415 Engineer, Electrical Equip.	813 Technician, Optical
428 Engineer, Electrochemical	937 Technician, Quality Control
447 Engineer, Chief (Petrol)	881 Technician, Plastics Engineering
579 Engineer, Heat Transfer	1125 Technician, Standards-Laboratory
580 Engineer, Heating	1189 Technical Illustrator
586 Engineer, Highway	
613 Engineer, Industrial	
726 Engineer, Marine	
738 Engineer, Measurement and Control	
766 Engineer, Mining	
921 Engineer, Propulsion Systems Design	
898 Engineer, Steam Power Plant	
980 Engineer, Rocket-Engine Test	
954 Engineer, Refrigeration	
1050 Engineer, Sanitary	
987 Engineer, Safety, Mines	
853 Engineer, Petroleum	

OCCUPATIONS IN MATHEMATICS AND
PHYSICAL SCIENCES
(D.O.T. FAMILY # 02)

83 Astrometrist
84 Astronomer
224 Chemist, Analytical
223 Chemist, Agricultural
222 Chemical Engineer Technician
225 Chemist, Food
226 Chemist, Inorganic
227 Chemist, Organic

OCCUPATIONS RELATED TO SCIENCE

(Cont-d)

OCCUPATIONS IN MATHEMATICS AND
PHYSICAL SCIENCES
(D.O.T. FAMILY # 02)

251 Climatologist
335 Demographer
448 Engineering Analyst
553 Geographer
554 Geologist
555 Geologist, Engineering
556 Geologist, Ground Water
557 Geologist, Mining
558 Geologist, Petroleum
559 Geophysical Prospector
560 Geophysicist
561 Glaciologist
606 Hydrographer (Meteorological
Aid)
607 Hydrologist
656 Laboratory Assistant
(Lt., Ht., Pr.)
659 Laboratory Tester I
754 Meteorologist
805 Oceanographer, Geological
806 Oceanographer, Physical
811 Operations Research Analyst
863 Physical Geographer
867 Physicist
868 Physicist, Atomic & Molecular
869 Physicist, Electronics
870 Physicist, Light
871 Physicist, Nuclear
872 Physicist, Theoretical
917 Programmer, Engr. & Science
1067 Seismologist
1138 Statistician, Phy. Science
& Engineer
1269 Volcanologist
1277 Weather Chart Preparer
1278 Weather Observer

OCCUPATIONS IN LIFE SCIENCES
(D.O.T. FAMILY # 04)

24 Agrogeologist
25 Agronomist
52 Anatomist
55 Animal Husbandman
128 Biochemist
133 Biologist
131 Biological Aid
134 Biophysicist
155 Botanist
330 Dairy Husbandman
331 Dairy Technologist
522 Forest Ecologist
523 Forester
552 Geneticist
594 Horticulturist
757 Microbiologist
822 Ornamental Horticulturist
856 Pharmacologist
946 Range Manager
1066 Seed Analyst
1106 Soil Conservationist
1107 Soil Scientist
1267 Vocational Advisor
1268 Vocational Counselor
1288 Wood Technologist

OCCUPATIONS IN SOCIAL SCIENCES
(D.O.T. FAMILY # 05)

21 Agricultural Economist
62 Anthropologist
66 Archeologist
400 Economist
372 Director, Historical Society
399 Economic Geographer
1053 Scientific Linguist

- b -

OCCUPATIONS RELATED TO SCIENCE

(Cont-d)

OCCUPATIONS IN MEDICINE AND
HEALTH

(D.O.T. FAMILY # 07)

53	Anesthesiologist	812	Ophthalmologist
89	Audiologist	816	Optometrist
90	Audiometrist	817	Oral Pathologist
129	Biochemistry Technologist	818	Oral Surgeon
138	Blood Bank Technician	824	Orthodontist
193	Cardiologist	825	Orthoptist
235	Chiropractor	826	Osteopathic Physician
308	Corrective Therapist (Med. Ser.)	841	Pathologist
329	Cytotechnologist	845	Pediatrician
336	Dental Assistant	847	Periodontist
338	Dental Hygienist (Med. Ser.)	855	Pharmacist, Druggist
341	Dentist	857	Pharmacy Helper
342	Dermatologist	864	Physical Therapist
358	Dietary Consultant	866	Physician, General Practice
357	Diet Clerk (Diet Aid)	886	Podiatrist
359	Dietitian	887	Podiatrist's Assistant
360	Dietitian (Teaching)	923	Psychiatrist
427	Electrocardiograph Tech.	930	Public Health Educator
429	Electroencephalograph Tech.	945	Radiologic Technologist
510	Flight Surgeon	944	Radiologic Technologist, Chief
551	General Practitioner	969	Research Nutritionist
575	Gynecologist	1049	Sanitarian
578	Hearing Clinician	1068	Serology Technician (Med. Ser.)
583	Hematology Technician (Med. Ser.)	1119	Speech Clinician (Correctionist)
620	Inhalation Therapist	1118	Speech & Hearing Clinician
658	Laboratory Technician, Vet.	1120	Speech Pathologist
742	Medical Assistant	1123	Nurse, Staff, Occupational
744	Medical Laboratory Ass.	1153	Surgeon
748	Medical Technologist	1159	Surgical Technician
758	Microbiology Technologist	1254	Urologist
796	Nuclear Medical Technol- ogist	1261	Veterinarian (Med. Ser.)
798	Nurse Anesthetist	1260	Veterinarian, Laboratory Animal
957	Nurse, Registered, Gen. Duty	1263	Veterinary Livestock Inspector
999	Nurse, Licensed Practical	1264	Veterinary Virus-Serum Inspector
800	Nurse, Office (Med. Ser.)		
909	Nurse, Private Duty		
802	Obstetrician		
803	Occupational Therapist		
804	Occupational Therapy Aid		

OCCUPATIONS IN EDUCATION
(D.O.T. FAMILY # 09)

314	County Agricultural Agent (Gov. Ser.)
315	County Home Demonstration Agent
471	Extension Service Agent (Gov.)

OCCUPATIONS RELATED TO SCIENCE

(Cont-d)

OCCUPATIONS IN EDUCATION
(D.O.T. FAMILY # 09)

472 Extension Service Specialist
476 Faculty Member, College
or University
485 Feed & Farm Management
Advisor
528 Four-H Club Agent
571 Ground Instructor, Basic
591 Home Economist
592 Home Economist, Consumer
Service
624 Instructor, Extension Work
626 Instructor, Military Science
906 Principal, School
1175 Teacher, Blind
1176 Teacher, Deaf
1177 Teacher, Elementary School
1178 Teacher, Handicapped
1179 Teacher, Industrial Arts
1180 Teacher, Junior College
1181 Teacher, Kindergarten
1182 Teacher, Mentally Retarded
1184 Teacher, Secondary School
1185 Teacher, Speech
1186 Teacher, Technical Education

OCCUPATIONS IN MUSEUM, LIBRARY,
AND ARCHIVAL SCIENCE
(D.O.T. FAMILY # 10)

207 Cataloger (Library)
247 Classifier (Library)
487 Film Librarian
678 Librarian
679 Librarian, Reference Lib.
745 Medical Record Librarian

OCCUPATIONS IN LAW AND JURISPRUDENCE
(D.O.T. FAMILY # 11)

246 Claim Attorney (Insurance)
378 District Attorney (Gov. Ser.)
653 Judge
665 Law Clerk
668 Lawyer
669 Lawyer, Corporation
840 Patent Agent
1171 Tax Attorney

OCCUPATIONS IN WRITING
(D.O.T. FAMILY # 13)

14 Advertising Copywriter
305 Copy Reader
306 Copy Writer
401 Editor, News (Radio & TV)
402 Editor, Newspaper
404 Editorial Writer
484 Feature Writer (Print & Pub.)
537 Gag Writer
577 Handbook Writer
645 Interpreter
677 Lexicographer
966 Reporter, News
976 Rewrite Man (Print & Pub.)
1058 Script Writer
1188 Technical Editor
1289 Writer, Technical Publications

OCCUPATIONS IN ART
(D.O.T. FAMILY # 14)

16 Advertising Illustrator
132 Biological Photographer
147 Book Illustrator
197 Cartoon Background Artist
206 Catalog Illustrator
272 Commercial Photographer
362 Director, Art (Commercial)

- d -

OCCUPATIONS RELATED TO SCIENCE

(Cont-d)

ART - Cont-d

376	Display Designer (Outside)	932	Public Relations Man
570	Graphic Artist	933	Publicity Supervisor
610	Illustrator	935	Purchasing Agent
611	Industrial Designer	1170	Tax Accountant
701	Magazine Illustrator		
743	Medical Illustrator		
794	News Photographer		
860	Photographer, Commercial		
986	Safety Clothing & Equip. Dev. Man		
1054	Scientific Photographer	1155	Superintendent, Park
1073	Set Director	1228	Traffic Manager (Air, Water Trans.)
1124	Stage Scenery Designer	1229	Traffic Manager (Any Ind.)
1195	TV Film Field Coordinator		

MANAGERS AND OFFICIALS
(D.O.T. FAMILY # 18)

OCCUPATIONS IN ENTERTAINMENT
& RECREATION
(D.O.T. FAMILY # 15)

56. Announcer, International
Broadcast

58. Announcer, Radio

59. Announcer, Supervisor

60. Announcer, Television

627. Instructor, Physical Educ.

OCCUPATIONS IN ADMINISTRATIVE
SPECIALIZATIONS
(D.O.T. FAMILY # 16)

13 Advertising Assistant

15 Advertising Director
(Print & Pub.)

18 Advertising Manager

165 Broker (Ret.; Whol. Tr.)

326 Customs Inspector

444 Employment Interviewer

616 Industrial Relations Dir.

877 Placement Officer (Educ.)

931 Public Information Writer

MISCELLANEOUS PROFESSIONAL, TECHNICAL
& MANAGERIAL OCCUPATIONS
(D.O.T. FAMILY # 19)

31 Air Traffic Cont. Specialist,
Tower

30 Air Traffic Control Specialist,
Sta.

40 Airline Radio Operator, Chief

42 Airplane Pilot (Agric.)

43 Airplane Pilot, Commercial

188 Camp Director

228 Chief, Air Traf. Control Supv.,
Gov.

242 City Planning Engineer

276 Community Organization Worker

278 Community Relations - Service Adv.

625 Instructor, Flying

791 Navigator (Air. Trans.)

929 Public Health Assistant

942 Radiographer (Industrial X-Ray)

1101 Social Worker, Medical

1203 Test Pilot

OCCUPATIONS RELATED TO SCIENCE

(Cont-d)

STENOGRAPHY, TYPING, FILING
AND RELATED OCCUPATIONS
(D.O.T. FAMILY # 20)

746 Medical Secretary
747 Medical Stenographer

COMPUTING AND ACCOUNT-RECORDING
OCCUPATIONS
(D.O.T. FAMILY # 21)

1132 Statistical Clerk

INFORMATION AND MESSAGE
DISTRIBUTION OCCUPATIONS
(D.O.T. FAMILY # 23)

12 Admitting Officer (Med. Ser.)

SALESMAN, SERVICES
(D.O.T. FAMILY # 25)

549 General Agent, Insurance
639 Insurance Agent
640 Insurance Broker
673 Leaseman (Bus. Ser.)
681 Life Underwriter
348 Real Estate Broker
956 Registered Account Advisor
1009 Salesman, Insurance
852 Salesman, Pest Control Ser.
1023 Salesman, Public Utilities
1025 Salesman, Real Estate

SALESMEN AND SALESPERSONS,
COMMODITIES
(D.O.T. FAMILY # 26 - 27 - 28)

274 Commission Man, Agric.
Produce
854 Pharmaceutical Detail Man
(Whol.)

996 Salesman, Chemicals & Drugs (Whol.)
998 Salesman, Dental & Medical Equip.
1001 Salesman, Farm & Garden Equip.
1011 Salesman, Livestock
1013 Salesman, Marine Supplies
1072 Service-Salesman, Milking Mach.
1040 Salesperson, Furs (Ret. Trade).
1042 Salesperson, Lawn-Garden Equip.
1047 Salesperson, Surgical Appliances

FOOD AND BEVERAGE PREPARATION AND
SERVICE OCCUPATIONS
(D.O.T. FAMILY # 32)

737 Meat Cutter

BARBERING, COSMETOLOGY, & RELATED
SERVICE OCCUPATIONS
(D.O.T. FAMILY # 33)

122 Beautician
310 Cosmetologist
430 Electrologist
441 Embalmer

MISCELLANEOUS PERSONAL SERVICE
OCCUPATIONS
(D.O.T. FAMILY # 35)

774 Morgue Man (Med. Ser.)
1262 Veterinary Hospital Attendant

PROTECTIVE SERVICE OCCUPATIONS
(D.O.T. FAMILY # 37)

270 Commanding Officer, Harbor Police
271 Commanding Officer, Homicide Sq.
345 Detective, Plainclothesman
346 Detective, Private Eye
491 Fire Fighter
492 Fire Fighter, Crash (Air Trans.)
493 Fire Inspector
646 Investigator, Narcotics

OCCUPATIONS RELATED TO SCIENCE

(Cont-d)

PLANT FARMING OCCUPATIONS
(D.O.T. FAMILY # 40)

662 Landscape Gardener
801 Nurseryman
1152 Superintendent, Greens
1244 Tree Surgeon

ANIMAL FARMING OCCUPATIONS
(D.O.T. FAMILY # 41)

54 Animal Caretaker
480 Farmer, Dairy
532 Fur Farmer
896 Poultryman, Meat
(Poultry Farmer)

MISCELLANEOUS FARMING &
RELATED OCCUPATIONS
(D.O.T. FAMILY # 42)

481 Farmer, General
1122 Sprayer (Agric.)

FISHERY AND RELATED OCCUPATIONS
(D.O.T. FAMILY # 43)

502 Fish Farmer
503 Fisherman, Hoop Net (Fish)
1081 Shellfish-Bed man

FORESTRY OCCUPATIONS
(D.O.T. FAMILY # 44)

494 Fire Lookout (Gov. Ser.)
524 Forester Aid
1242 Tree Planter (Forestry)
1243 Tree Pruner (Forestry)

HUNTING, TRAPPING, & RELATED OCCUPATIONS
(D.O.T. FAMILY # 45)

538 Gamekeeper
602 Hunting & Fishing Guide

AGRICULTURAL SERVICE OCCUPATIONS
(D.O.T. FAMILY # 46)

72 Artificial Breeding Technician
332 Dairy Tester

OCCUPATIONS IN FABRICATION, ASSEMBLY,
& REPAIR OF METAL PRODUCTS

168 Brooch Maker
569 Gold Beater (Gold Leaf & Foil)
648 Jeweler
1093 Silversmith (Silverware)
1144 Stone Setter

OCCUPATIONS IN FABRICATION & REPAIR OF
SCIENTIFIC & MEDICAL APPARATUS, PHOTO-
GRAPHIC & OPTICAL GOODS, WATCHES &
CLOCKS, AND RELATED PRODUCTS
(D.O.T. FAMILY # 71)

339 Dental Laboratory Technician
340 Dental Technician, Crown & Bridge
608 Hydrometer Calibrator
622 Inspector, Optical Elements
814 Optician, Dispensing
815 Optician, Optical Mechanic

PAINTING, DECORATING, & RELATED OCCU-
PATIONS
(D.O.T. FAMILY # 74)

445 Enameler, Jewelry

OCCUPATIONS RELATED TO SCIENCE

(Cont-d)

OCCUPATIONS IN FABRICATIONS &
REPAIR OF SAND, STONE, CLAY,
& GLASS PRODUCTS

(D.O.T. FAMILY # 77)

348 Diamond Cutter

OCCUPATIONS IN METAL FABRICATING
(D.O.T. FAMILY # 80)

304 Coppersmith

1214 Tinsmith

WELDERS, FLAME CUTTERS, &
RELATED OCCUPATIONS

(D.O.T. FAMILY # 81)

973 Resistance Machine Welder

974 Resistance Welding Tech.

ELECTRICAL ASSEMBLING, INSTALLING
& REPAIRING OCCUPATIONS

(D.O.T. FAMILY # 82)

468 Experimental-Rocket-Sled
Mechanic

486 Field Engineer (Electronics)

753 Meteorological Equipment
Repairman

753 Meteorological Equipment
Repairer

PAINTING, PLASTERING, WATER-
PROOFING, CEMENTING, & RELATED
OCCUPATIONS

(D.O.T. FAMILY # 84)

135 Bituminous Enameler

565 Glass Tinter (Glass Prod.)

663 Lather (Const.)

EXCAVATING, GRADING, PAVING, & RELATED
OCCUPATIONS

(D.O.T. FAMILY # 85)

169 Bulldozer Operator

394 Dredge Operator (Const.)

462 Excavator

1245 Trench Digging Machine Operator

CONSTRUCTION OCCUPATIONS

(D.O.T. FAMILY # 86)

74 Asbestos Worker

140 Boatbuilder, Wood

195 Carpenter (Construction)

1145 Stonemason

OCCUPATIONS IN PRODUCTION & DISTRIBUTION
OF UTILITIES

(D.O.T. FAMILY # 95)

899 Power-Reactor Operator

1131 Stationary Engineer

OCCUPATIONS IN GRAPHIC ART WORK

(D.O.T. FAMILY # 97)

265 Color-Laboratory Technician

1110 Sound & Laboratory Engineer

COMPUTER TAPE EXAMPLE

HEL-S530

PORT 9 4-18-73 3:15 PM
FOR SYSTEMS NEWS GET AND RUN SYSNEW.

WELCOME TO T J E S 2000C1 TIME SHARING SYSTEM.
READY

GET-*GIS
RUN
GIS /

READ-ONLY FILES:
#1 #2 #3

INTERACTIVE LEARNING SYSTEMS

GUIDANCE INFORMATION

WHICH FILE? OCCU

OCCUPATIONAL INFORMATION READY

?P561

561
GLACIOLOGIST
024.081

COMPUTER TAPE EXAMPLE

(Cont-d)

JOB DESCRIPTION AND WORKER REQUIREMENTS:
STUDIES THE EFFECTS OF GLACIERS ON THE CHANG-
ING EARTH'S SURFACE. APPLIES KNOWLEDGE OF
CHEMISTRY, PHYSICS, MATH & BIOLOGY. REQ.
ABILITY TO ACQUIRE NEEDED ACADEMIC BACK-
GROUND; THOROUGHNESS; INQUISITIVE MIND.

RELATED JOBS:
HYDROLOGIST 024.081
OCEANOGRAPHER, PHYSICAL 024.081
SEISMOLOGIST 024.081
MINERALOGIST 024.081

FOR FURTHER INFORMATION:
AMERICAN GEOPHYSICAL UNION
2100 PENNSYLVANIA AVE., NW. WASH., D.C. 20037
SOCIETY OF EXPLORATION GEOPHYSICISTS
BOX 3098, TULSA, OKLAHOMA 74101

?I561

561

GLACIOLOGIST

1	3	103	104	106	129	135	136	138	146	149	150	151	152
153	154	156	159	162	165	168	171	172	175	178	181	184	187
189	197	198	200	202	218	221	227	229	232	233	236	244	246
254	269	277	283	284	285	286	287	288	289	290	291	292	

?Q

WHICH FILE?NONE

END
BYE
003 MINUTES OF TERMINAL TIME
P