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ABSTRACT

Historically in the United States, few people with disabilities have enrolled in science-related courses or entered scientific careers in part because high schools and colleges have not offered accessible training to this population. This document is the teaching and resource guide that accompanies a 30-minute video program in career development for potential employers of persons with disabilities. The program presents the opinions of supervisors, co-workers, and other employers on the experience of working with disabled scientists. The program also addresses many general concerns employers frequently have about hiring disabled people. The goals of the program are to encourage students with physical or sensory impairments to consider careers in mathematics and science; and to encourage teachers, parents, and counselors to support disabled people in their efforts to achieve successful careers in these areas. Included in this guide are: descriptions of the materials; a program summary; a list of myths and facts about people with disabilities; a list of guidelines for employers; a discussion of insurance and tax issues for employers; a glossary of terms; and a list of resources for obtaining information and support concerning hiring the disabled. (CW)

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R E S O U R C E G U I D E

SCIENCEABLED

Return on Equity

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Front cover photos courtesy of the American Association for the Advancement of Science Project in Science, Technology, and Disability

A resource guide for
the *Science Abled* video program

Return on Equity

A 30-minute video program for potential
employers of people with disabilities

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"You have been watching a group of outstanding scientists at work in such diverse fields as computer programming, biochemical research and the teaching of science. You have heard testimony about how good they are at what they do. But the people you have just seen are the tip of the iceberg. They represent thousands of other productive disabled Americans. But millions of others who are also challenged by physical and sensory impairment are unemployed.

Our handicapped scientists and science students need an environment in which they can thrive and contribute. It is up to us to make certain science labs can be adapted, work stations are made accessible, and routines modified. It requires creativity, novel solutions, and a commitment of the challenge. Together we can ensure the economic and scientific future of our society. Let's do it and do it now."

Senator Bob Dole, Kansas, 1986

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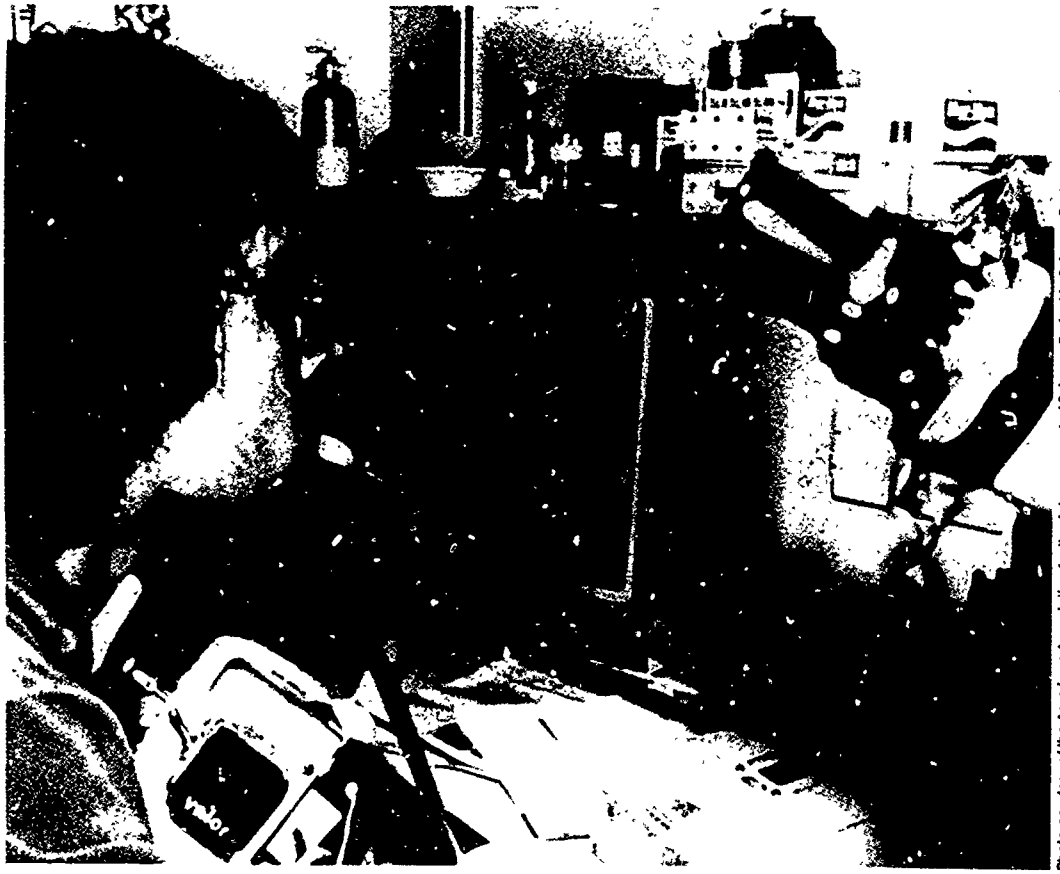

Photo courtesy of the American Association for the Advancement of Science Project in Science, Technology, and Disability

A disabled scientist works with adapted equipment. Most disabled workers require no special modifications in the workplace. When adaptations are necessary, they are usually minor.

Introduction to the *Science Abled* Series

Overview and Purpose

The ***Science Abled*** series consists of two video programs and two accompanying resource manuals. The first program, "Good Minds at Work," is addressed to students and their counselors, parents, and teachers. The program features female and male scientists of various ethnic backgrounds, disabilities, and lifestyles as role models. A variety of science careers are represented: science teacher, computer programmer, psychiatrist, physicist, medical technologist, systems engineer, and chemistry professor.

The second program, "Return on Equity," is intended primarily for potential employers. This program presents the opinions of supervisors, coworkers, and other employers on the experience of working with disabled scientists. The program also addresses many general concerns employers frequently have about hiring disabled people.

"Good Minds at Work" and its accompanying resource guide are also available from AIT.

The goals of the ***Science Abled*** series are to

- encourage students with physical or sensory impairments to consider careers in science or technology
- encourage teachers, parents, and employers to support disabled people in their efforts to achieve successful careers in these areas

Historically in the United States, few people with disabilities have enrolled in science-related courses or entered scientific careers, in part because high schools and colleges have not offered accessible, hands-on science training. This lack of student aspiration and educational opportunity harms both the country and its disabled citizens.

According to a recent survey, two-thirds of all disabled Americans between the ages of 16 and 64 are not working (International Center for the Disabled and Louis Harris and Associates 1986).

Why do physical disabilities and low employment rates seem to be related? Research has indicated a number of barriers that prevent disabled people from realizing their career potential.

1. Early influences can discourage disabled individuals from accepting goals that require competitive training (Weinberg 1982).
2. Teachers and counselors do not provide enough helpful feedback to disabled students (Chandler 1981).
3. Classroom planning and activities are insufficient (Damborg 1981).
4. The general life environment often discourages such expectations (Pati and Adkins 1981).

If we hope to increase the potential of disabled people to accomplish professional work in the sciences, we must confront these and other barriers. The developers of the ***Science Abled*** series tried carefully to address a variety of specific barriers, including the double barriers facing disabled women. The series was designed to help compensate for the paucity of disabled role models in science and for the lack of classroom, counseling, and inservice materials.

With the passing of federal laws in the 1970s, such as the Education for All Handicapped Children's Act (PL 94-142) and the Rehabilitation Act, more students with physical or sensory limitations are being graduated from high schools and colleges. The impact of these laws is significant, because the association between higher education and the employment of disabled people is great.

The 1986 International Center for the Disabled survey concludes that "about four times as many working disabled people have a four-year college education as those who don't work." Those who do work are more satisfied with life and much less likely to say that their disabilities have prevented them from reaching their full potential. Ideally, through counseling that stresses academic opportunities, the education of disabled people focuses on career preparation.

Due to the increasing need for scientitically trained graduates, educators must address certain issues. In spite of expanded educational

opportunities, few students with disabilities are receiving the academic training that would enable them to enter the nation's scientific work force. This project is designed to help increase the number of students with disabilities who choose science as a course of study and a career. As Betty Vetter, Director of the Commission on Professionals in Science and Technology has said, "With fewer people eligible for training at the college level, the need to utilize the best minds in science and technology is obvious. We won't have the best unless we utilize *all* of the available talent pool."

References

Chandler, T. A. 1981. Don't handicap the handicapped. *Education* 102:2 (Winter).

Dahl, P., O. Baker, and L. Harrison. 1981. Career stereotypes: What they are and how they can be addressed. *Journal of Career Education* 8:1 (September).

Damborg, L. 1981. Mainstreaming: Classroom complexities for the regular teacher. *Education* 86:4 (May).

International Center for the Disabled and Louis Harris and Associates. March 1986. *The ICD Survey of Disabled Americans: Bringing Disabled Americans into the Mainstream.* New York.

Makowski, T. F. 1982. Slice of life. *Journal of Career Education* 8:4 (June).

Pati, G., and J. Adkins, Jr. 1981. *Managing and Employing the Handicapped.* Lake Forest, IL: Brace-Park Human Resource Press.

Weinberg, N. 1982. Growing up physically disabled: Factors in the evaluation of disability. *Rehabilitation Counseling Bulletin* 25:4 (March).

Introduction to 'Return on Equity'

Materials

The *Science Abled* program, "Return on Equity" is a 30-minute video program accompanied by this resource guide. It is designed for current and potential employers of people with disabilities. Counselors and teachers of disabled students may also find this program useful.

Supplementary Materials

This guide contains the following supplementary materials, which may be duplicated and distributed to viewers for reading and discussion after the program.

- "Biographies of the Scientists," pages 4–5
- "Myths and Facts about Disabled People," page 6
- "Ensuring Productivity: Guidelines for Current and Potential Employers of People with Disabilities," pages 7–10
- "Insurance, Tax Incentives, and Tax Benefits for Employers," page 11
- "Glossary," pages 12–14
- "Information Sources on Disability Concerns," pages 15–17
- "Additional Resources," pages 18–21

Using the Materials

"Return on Equity" and this resource guide can be used separately or together in a variety of settings, such as

- company workshops and training sessions for top or middle management, on-line supervisors, and co-workers of disabled employees
- workshops and training sessions for community leaders, university and community college personnel, or teachers and counselors; these workshops might be given by schools, public agencies, chambers of commerce, individual corporations, or businesses
- local cable stations
- career fairs

Before the Program

Note to workshop leader: Before showing the program, duplicate the supplementary materials in this guide that you want participants to read and discuss after the program. (See page 3 for a list of the materials.) To begin, you might conduct a discussion on the questions and reservations people commonly have about hiring and working with disabled people. Ask participants to make a list of such questions and reservations and to observe if any of these are addressed in the program.

Program Summary

The narrator suggests that many employers have questions and concerns about hiring disabled employees. In a segment with a typical employer (Mike Levine, president of Quad Six, Incorporated), three common concerns about hiring disabled people are mentioned. The first is effective communication. Levine stresses that employees must be able to communicate clearly with their co-workers, and he expresses concern that disabled employees might not be able to do so. His second concern centers on accommodations and adaptations. He notes that Quad Six owns several older buildings, and he fears that the process of making them accessible and hospitable for disabled employees might be difficult and expensive. His third concern is lay-offs. He explains that he would find it more difficult to lay off a disabled employee than a nondisabled employee.

The narrator introduces eight scientists, each with a different disability, who are seen working successfully in a variety of settings. Through candid interviews with these scientists and their employers and co-workers, viewers learn that disabled scientists can work productively with a minimum of special accommodations. Their success stories challenge the concerns raised by Mr. Levine and demonstrate ways in which barriers against disabled employees can be eliminated.

The program illustrates that many of the accommodations and adaptations employers have made to enable these scientists to perform their jobs comfortably and efficiently are minor and inexpensive. The narrator states that federal law requires an employer to make reasonable accommodations that do not create undue hardship on the company.

The narrator raises other questions often asked about disabled workers: Do they have the same level of general health and stamina that nondisabled employees have? Are they absent more frequently? Anne Swanson, a chemistry professor with a disability, cites research conducted by the DuPont Corporation indicating that disabled employees have equal or better safety records and absentee rates than nondisabled employees.

Disabled scientists David Hartman and June Rooks discuss the fear and uncertainty that co-workers sometimes feel before they actually get to know their disabled colleagues. Their personal experiences suggest that disabled scientists are quickly accepted by their colleagues, despite initial reservations.

Robert Larsen, a disabled chemical engineer, offers some advice for current and potential employers of scientists with disabilities: "What you are looking for is not a body, but a mind, because it is the mind that progresses in the laboratory. The handicapped individual wants the right to fail, like everybody else."

In conclusion, Robert Pew, an employer at Steelcase, Incorporated, talks about his company's strong commitment to disabled employees. "They are as productive as able-bodied employees," he explains. "The secret is to find the proper jobs for them."

Note to workshop leader: You might wish to conduct a follow-up discussion or information session to help answer questions viewers may have after the program. You might also use the resources on the following pages to lead a follow-up workshop designed to meet the needs of your specific audience.

Biographies of the Scientists

The following scientists appear in "Return on Equity." Their biographies are arranged in order of their appearance in the program.

Jeff Peters manages a six-person team of systems engineers. "It took me 32 years to be able to afford a van, a family, and Geoffrey Beene suits,"

Jeff says. He has cerebral palsy, which affects his arms and, to a greater extent, his legs. He uses an Amigo wheelchair, which functions somewhat like an electric scooter. Jeff's special interests are skydiving, playing chess blindfolded, playing with his kids, barbecuing, and fishing. He wants to be the first disabled scientist on the space shuttle.

Jeff Himmelstein teaches biology and environmental education in a New Jersey high school. He also conducts student tours of the Yucatán jungle in Mexico. His classroom is filled with cages of small animals, snakes, and spiders. He became deaf from unknown causes in the first few years of his life. He uses a hearing aid, which is attached to an amplifier that he wears under his shirt, and also reads lips. In large groups he must use an oral interpreter. He is married and has two teenaged children, both of whom attend the high school in which he teaches.

Martha Burks is an associate programmer at a university computing center in Ohio. She describes her athetoid cerebral palsy in this way: "Every action on my part causes an unpredictable reaction that I can or cannot control, depending on how relaxed I am. I cannot speak normally, but I can make myself understood." Martha's best friend, Helen Jones, encouraged her to become more independent. Helen, who is also disabled, runs her own business. Martha is currently on the board of directors of Total Living Concepts, Inc., an independent living agency for disabled people. For relaxation, Martha goes to plays and shows, listens to records, and reads voluminously.

June Rooks works as a physicist for a naval weapons center in California. Because of her post-polio paralysis, June wears leg braces and uses metal canes with sleeves for her arms, carrying her weight mainly on her arms and shoulders and swinging her legs between her canes. June, who grew up in Mississippi, was not able to attend school until she was 10 years old because they were not accessible to disabled children at that time. During her college years, June decided to run for campus queen. She came in second runner-up, traveled with the football team, and participated in the homecoming parade.

Lorraine Poor works as a medical technologist in California. She works on the afternoon shift at the medical laboratory, so that she can spend mornings with her baby daughter. She and her husband share child care and housekeeping responsibilities. Lorraine uses a wheelchair because of post-polio paralysis of her legs. Because she has scoliosis (a curvature of the spine), she practices weight lifting at a local college to strengthen her upper body. Lorraine enjoys skiing, hiking with the Sierra Club, and scuba diving.

Anne Swanson was born with osteogenisis imperfecta or "brittle bones." She is 43 inches tall and walks with a cane. Anne has had many operations to correct and stabilize this condition. A university professor once told her that girls didn't belong in a chemistry class; now she is a chemistry professor. Through her practice of what she calls "creative disobedience," Anne has proven the experts wrong throughout her life. When she was an infant, the doctors told her parents that she would be mentally retarded and would never be able to attend school, yet she earned a Ph.D. in biochemistry. Common stereotypes suggested that she would never experience romance, sex, or marriage, yet she has been happily married for 17 years. In her leisure time, Anne enjoys playing the piano. She has traveled all over the United States and Europe.

David Hartman is a psychiatrist. He is married and has three young children. David describes himself as persistent. His persistence, along with this sense of humor, helped him when he tried to get into medical school. He has written an autobiography, *White Coat, White Cane*, from which the television movie "Journey from Darkness" was made. David has been blind since the age of eight, when he underwent a series of eye operations. He has always loved sports. He was a wrestler in high school and enjoys swimming. He recently broke his foot playing baseball with his kids.

Bob Larsen worked at Argonne National Laboratories as an analytical chemist for 32 years, until his retirement. He recently returned to Argonne as a special term appointee, working as a consultant for several scientists. For many years he was Chief of the Analytical Laboratory and then, because of his background in the chemistry of plutonium, he transferred to the Radiological and Environmental Research Division. Bob contracted polio as a child and currently uses a wheelchair. When Martha Burks attended a summer internship for disabled students at Argonne, she found Bob Larsen a strong source of inspiration and support.

Myths and Facts about People with Disabilities

As physical barriers continue to dissolve and as new technologies make communication and mobility easier, commonly held attitudes toward disabled people must change. Awareness of the abilities and capabilities of disabled people is the key. Myths about people with disabilities must be replaced by facts to create a full range of employment opportunities for them.

Myth	Fact
1. Handicapped people are sick all the time; we won't be able to bring our research in on schedule.	1. Eighty-five percent of disabled workers were rated by their supervisors as average or better in attendance.*
2. Disabled employees are less productive than nondisabled employees.	2. Ninety-two percent of disabled workers were rated by their supervisors as average or better on the performance of their job duties.*
3. Modification of work areas and buildings is costly.	3. Most disabled workers require no special modifications. Most necessary accommodations are minor.
4. Someone in a wheelchair can't work in a laboratory.	4. Labs, like other work spaces, can be made accessible relatively easily.
5. Handicapped people can't function as members of a research team because of their limited mobility or because of tasks they can't do.	5. Work teams can arrange job responsibilities so that the team as a whole can benefit from the special abilities of every member, disabled or nondisabled.
6. The more severely disabled people are, the less intelligence they have.	6. People can have severe disabilities and brilliant minds.
7. All people who use wheelchairs have the same needs.	7. Each person who uses a wheelchair is a unique individual with unique needs.
8. All disabled people who have overcome their handicaps are courageous, brave, and inspirational.	8. Disabled people try to carry on their lives as normally as possible.
9. Disabled employees are safety risks in the workplace.	9. Ninety-six percent of disabled workers were rated by their supervisors as average or better regarding safety.*
10. Other employees won't accept a disabled coworker.	10. People should be hired for their job skills, not for their potential sociability.
11. It's not worth the bother to hire a handicapped person.	11. It's always worth the effort to get an intelligent, motivated, and productive employee.

*Statistics from "Equal to the Task," a 1981 survey of 2,745 disabled DuPont Corporation employees.

Ensuring Productivity: Guidelines for Current and Potential Employers of People with Disabilities

Goal: These guidelines are offered to assist current and potential employers of people with disabilities. Five goals for ensuring the productivity of disabled employees are identified, followed by strategies and specific actions designed to help employers meet these goals.

Directions: Review each goal and the strategies suggested for achieving it. Discuss them with others in your company, including supervisors and staff. If possible, include a person who has a disability in the discussion. Focus on ways in which your company is dealing with or will deal with each goal.

Goal I. Make a company commitment to hiring disabled employees and create a positive atmosphere.

A. Spread the word within the company.

1. Model a strong management commitment to hiring workers with disabilities.
2. Build acceptance of handicapped workers within the company publicly through policy manuals, newsletters, and meetings. Invite your staff to view and discuss "Return on Equity" and to use this resource guide.

B. Gather information and assign responsibilities.

1. Train a staff member as a specialist in disabilities. This staff member might be a personnel manager, engineer. job supervisor, or affirmative action specialist.
2. Develop a file of resources for information on accessibility and accommodations. Use this manual, local disability agencies, and state and federal government agencies as sources.
3. Develop a list of alternative financial resources to defray the cost of accommodations.
4. Create and use a team approach to plan accommodations as needed.

Goal II. Recruit to create an applicant pool of qualified disabled people.

A. Recruit formally.

1. Place ads in newspapers and occupational and professional journals stating that you are an equal opportunity or affirmative action employer.
2. Place ads in the journals and newsletters of disability organizations.
3. Publicize your interest in hiring qualified people with disabilities. Send information to college recruiters, employment agencies, and career fairs.

B. Recruit informally.

1. Alert others to the fact that you are interested in hiring qualified people with disabilities through your social and business networks.

2. Join local and national commissions and task forces dedicated to employing disabled people.

Goal III. Interview to find the best match between company needs and applicants' skills.

A. Review hiring procedures and standards.

1. Standards should be neither more nor less rigorous for disabled people than for non-disabled people.

2. Procedures and standards should be analyzed for relevance to specific job requirements and modified if necessary.

B. Interview.

1. Be prepared to interview some disabled job applicants. You may not be informed in advance of the disability of a job applicant.

2. Ask the applicant about his or her experience, education, and work skills first; questions about disability should not dominate the interview.

3. Ask for job-related disability information only. Ask the person directly. Keep the questions task oriented.

4. Consider requiring work samples as a test of skills and abilities. This is a good idea for all job applicants.

5. Discuss specific accommodations and adaptations, if needed, during a second interview, or when the job offer is made.

Goal IV. Facilitate productivity on the job.

A. Review procedures and standards.

1. Expect high-quality work completed in a timely fashion.

2. Allow the employee some input into how the work gets done and some participation in decisions that affect her or him. This is a good idea for all employees.

B. Review the need for accommodations and adaptations.

1. Consider the strengths of the each employee. Be sensitive to the working conditions that boost productivity.

2. Consider that almost everyone needs some work accommodations, such as computers, training, increased lighting, comfortable room temperature, comfortable desk chair, etc.

3. Think of common-sense solutions for accommodation needs.

4. Consider how a particular accommodation or adaptation for a specific individual might benefit many employees.

5. Base accommodations on joint employer-employee discussions and refer to the needs of a particular job and a particular person.

6. Consider nonroutine or creative strategies for solutions to accommodation problems.

7. Remember that accommodations may mean accepting nontraditional ways of doing tasks.

C. Review the types of accommodations and adaptations that may be necessary.

1. Consider the need to redesign facilities and equipment.

2. Consider ways to redesign or modify jobs by changing routines or exchanging tasks with other employees.

3. Consider training the disabled employee to provide any new or expanded job skills required for a particular job (as you might need to do for any new employee).

4. Think of ways to provide ongoing support (having someone available to carry a tray in the lunchroom or to take notes at meetings, etc.).

5. Allow a disabled employee additional time to adjust to a new job, if necessary.

6. Remember that "reasonable" is the legal test of whether an accommodation should be made for a person's disability. The company need not suffer "undue hardship" in making accommodations for disabled workers.

7. Remember that personal aids and assistive devices (hearing aids, canes, wheelchairs, personal care attendants, special transportation, etc.) are the responsibility of the employee.

8. When hiring a handicapped person, consider that the entire building might not need to be made accessible, but rather the "program" areas or departments in which the disabled employee will work. In many cases a "program" or department can be relocated to an accessible area such as a ground floor.

D. Consider safety.

1. Emergency signals should include blinking lights as well as auditory alarms.

2. Fire drills and other emergency drills should be practiced regularly. This could benefit all employees.

3. A buddy system should be in place for emergencies, pairing disabled and nondisabled employees.

4. All exits should be identified and clearly marked.

Goal V. Enhance communication on the job.

A. Improve communication for all employees.

1. Clearly delineate tasks, assignments, job responsibilities, evaluation procedures, priorities, and time lines.
2. Make sure that all expectations and assignments are understood. This may mean repeating instructions, listening carefully, and asking questions.
3. Prepare agendas and other written material in advance if possible.
4. Group meetings may require special seating arrangements for wheelchair users and hearing-impaired people. Ask if interpreters or microphones are necessary.
5. Use printed or typewritten rather than handwritten messages for ease of reading.
6. With speech- or hearing-impaired employees, use written instructions rather than verbal ones.
7. With visually impaired employees, use verbal rather than written communication, or use tape recorders, talking computers, or other technological devices.
8. With hearing-impaired employees, use special telephones or adaptations to ordinary telephones.
9. If an employee has limited hand or arm movements, use push-button telephones and computer adaptations.
10. Install a clear sign system identifying important locations in the office or building.
11. Remember, as people get to know one another, communication becomes easier.

B. Reduce social barriers.

1. Avoid special treatment and stereotyping of people with handicaps.
2. Orient other employees to the accommodations and adaptations needed by the disabled employee.
3. Consider pairing a nondisabled employee with a disabled one for orientation purposes and team work.
4. Schedule company-sponsored social gatherings in accessible places and at times when transportation is available.
5. Remember that social involvements and friendship are the responsibility of the employees, not the employer.

Summary: Ensuring the productivity of employees with disabilities is a relatively simple task. Accommodations can be simple and cost-effective. Most of the suggestions mentioned in these guidelines would increase the productivity of all employees. The same qualities that make a good manager, supervisor, or company president enable that person to be a successful employer of disabled people. What is required is motivation, creativity, problem-solving skills, and a willingness to take risks.

Insurance, Tax Incentives, and Tax Benefits for Employers

Note: Many unfamiliar terms and references to federal laws are defined and described in the "Glossary" on pages 12–14 of this guide.

Worker's Compensation

Hiring a worker with a prior physical disability does not increase worker's compensation premiums. Premiums are computed on the basis of two factors: the occupational hazard class into which the business falls, and the past accident record of the company. The physical condition of employees is not considered in the computation of worker's compensation premiums. However, because worker's compensation is financed by private insurance companies, a particular company might refuse to underwrite the risk if a disabled employee is hired (of course, another excuse will be given). Although this is rare, it might be necessary to shop around for an insurance carrier.

Second Injury Law of Worker's Compensation

An employer who hires a worker with a prior physical disability is protected from an increase in worker's compensation cost by the Second Injury Law. This law states that, if the disabled employee becomes permanently handicapped because of a job-related injury, the employer's obligation to the employee is limited in terms of disability, death, or medical payments. The Second Injury Fund, administered under the Department of Labor, will pay the remainder of the financial obligation.

Health Insurance

Large companies usually do not have problems purchasing health insurance for workers with disabilities. A firm with 15 or fewer employees might have some difficulty obtaining health insurance from some insurance carriers. Shopping around for a different carrier will usually solve the problem.

Tax Deduction for Businesses for Barrier Removal

This tax deduction provision provides for a one-time $35,000 tax deduction for businesses that make their privately owned, publicly used facilities accessible by removing architectural barriers. The Tax Reform Act of 1986 provides for the permanent extension of this provision. For a copy of the regulations write to the Internal Revenue Service.

Targeted Jobs Tax Credit (TJTC)

The TJTC was part of the Revenue Act of 1978. At the time this guide went to press, the program had been extended through December 1989. The TJTC provides employers with a tax credit for hiring individuals from one of nine targeted groups. Additional information is available from the Internal Revenue Service and from your local Vocational Rehabilitation office.

Job Training Partnership Act (JTPA)

The JTPA utilizes federal, state, and local resources to help prepare disadvantaged and long-term unemployed people for productive employment in the private sector. People with disabilities are generally eligible under this act. Training is developed and administered locally.

Projects with Industry (PWI)

This program consists of discretionary grants administered by the Rehabilitation Services Administration in the U.S. Department of Education. PWI services range from skill training to job placement activities. One example of a PWI program is I.B.M. Computer Training for the Disabled, with over 30 locally administered training sites. Another program was organized jointly by the aeronautics industries in Seattle, Washington. For further information, contact the U.S. Department of Education, Rehabilitation Services Administration.

Additional information on these programs and others is available from the President's Committee on Employment of People with Disabilities, the National Alliance of Business, your state Department of Labor, and your local Vocational Rehabilitation office. Addresses for these organizations are included in the "Information Sources on Disability Concerns," pages 15–17.

Glossary

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Architectural Barriers Act of 1968—This statute (PL 90-480), enacted on August 12, 1968, ensures that certain facilities—those owned, occupied, or financed by the federal government—are designed and constructed so as to be accessible to the physically handicapped. The act spells out the type of "building" and "facility" to which accessibility standards are applicable.

Architectural and Transportation Barriers Compliance Board (A&TBCB)—Section 502 of the Rehabilitation Act of 1973, as amended, established the A&TBCB as a regulatory, monitoring, reporting, and investigative body operating under the Architectural Barriers Act. The Board is composed of representatives from 10 federal departments and agencies, in addition to 11 members from the general public. It examines and determines ways to eliminate barriers—physical and attitudinal—and makes reports and recommendations to Congress. To carry out its functions, the Board can conduct investigations, hold public hearings, and issue orders.

barrier-free environment—A barrier-free environment is one that contains no obstacles to accessibility and usability by handicapped people. Section 504 of the Rehabilitation Act of 1973 emphasizes the concept of program accessibility, but does not mandate a barrier-free environment. Barriers may exist under Section 504 as long as they do not impinge upon program accessibility. Rules related to new construction and alterations, however, do apply barrier-free requirements whenever new facilities (or portions of facilities) are constructed by federal fund recipients.

equal opportunity—Equal opportunity for qualified handicapped people is an objective of Section 504 of the Rehabilitation Act of 1973. Equal opportunity is the achievement of accessibility; the provision of benefits, services, and aids that are equally effective for handicapped and nonhandicapped people; and the development of programs and activities that are otherwise free from discrimination based on handicap. Equal opportunity, and not merely equal treatment, is essential to the elimination of discrimination. Identical treatment will not, in some cases, afford handicapped people the adjustments or accommodations required to achieve such opportunities—to work, learn, or receive services—that are truly equal.

handicapped person—This term refers to any person who (1) has a physical or mental impairment that substantially limits one or more major life activities such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working; (2) has a record or history of such an impairment, or has been misclassified as having a mental or physical impairment that substantially limits one or more major life activities; or (3) is regarded as having such an impairment. "Regarded as having such an impairment" may refer to any person who (1) has a physical or mental impairment that does not substantially limit major life activities, but who is treated by a recipient as one who possesses such a limitation; (2) has a physical or mental impairment that substantially limits major life activities only as a result of the attitudes of others toward such an impairment; or (3) has no physical or mental impairments, as this term is defined, but who is treated by a recipient as one who has such an impairment.

nondiscrimination—Nondiscrimination is mandated by Section 504 of the Rehabilitation Act of 1973, which states that "no otherwise qualified handicapped individual...shall, solely by reason of handicap," be subjected to discrimination in any program or activity covered by Section 504. Ensuring nondiscrimination, then, is the recipient's charge under Section 504, to be met through the achievement of program accessibility, equal opportunity, full participation in programs and activities, and the receipt of services.

physical or mental impairment—This term includes (1) any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs;

cardiovascular; reproductive; digestive; genitourinary; hemic and lymphatic; skin; and endocrine; or (2) any mental or physical disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities. The term "physical or mental impairment" includes, but is not limited to, the following diseases and conditions: orthopedic, visual, speech, and hearing impairments; cerebral palsy; epilepsy; muscular dystrophy; multiple sclerosis; cancer; heart disease; diabetes; mental retardation; emotional illness; drug addiction; and alcoholism.

program accessibility—"Program accessibility" is perhaps the key term in Section 504 of the Rehabilitation Act of 1973, because a recipient will be ensuring nondiscrimination and equal opportunities if its programs and activities are accessible to and usable by handicapped people. Program accessibility is a flexible principle allowing recipients to comply based on individual responses to existing conditions and the needs of their handicapped participants. In many instances, programs and activities may be made accessible through slight modifications and adjustments in procedures, practices, and policies. In others, building renovation or construction may be required. But structural change is required only in instances where program accessibility cannot be achieved effectively through other means.

qualified handicapped person—An individual who (1) with respect to employment, is a handicapped person who, with reasonable accommodation, can perform the essential functions of the job in question; and (2) with respect to services, is a handicapped person who meets the essential eligibility requirements for the receipt of such services.

reasonable accommodation—Under Section 504 of the Rehabilitation Act of 1973, "reasonable accommodation" is the principle by which a recipient's employment practices are to be made accessible to qualified handicapped people. Recipients are required to make certain adjustments to the known physical and mental limitations of otherwise qualified handicapped applicants and employees, unless it can be demonstrated that a particular adjustment or alteration (a "reasonable accommodation") would impose an undue hardship on the operation of the program. (See Section 504, paragraph 620 of the Rehabilitation Act of 1973 and the entry in this glossary titled "undue hardship.") For example, an employer might be required to rearrange office furniture to allow for passage of a wheelchair, relocate some offices or classrooms to a ground floor or other accessible location, or relieve a deaf secretary of phone responsibilities. Under Section 504, such accommodations may be required to ensure equal employment opportunities for handicapped people. However, no essential job functions need be altered and no new jobs need be created for handicapped people.

Section 502—Section 502 of the Rehabilitation Act of 1973 (PL 93-516 and PL 95-602), established the Architectural and Transportation Barriers Compliance Board (A&TBCB) to oversee enforcement of the Architectural Barriers Act of 1968 and of accessibility standards for federally owned, occupied, or leased buildings or facilities.

Section 503—Section 503 of the Rehabilitation Act of 1973 (PL 93-112), as amended (PL 93-516 and PL 95-602), is an affirmative action statute. This separate law, administered by the Labor Department's Office of Federal Contract Compliance Programs, applies to all federal (sub)contractors with (sub)contracts of $2,500 or more. It mandates affirmative action to employ and advance in employment qualified handicapped people. In addition, it requires all recipients with 50 or more employees and one or more federal contracts of $50,000 or more to prepare and maintain affirmative action programs.

Section 504—Section 504 of the Rehabilitation Act of 1973 (PL 93-112), as amended (PL 93-516 and PL 95-602), guarantees specific rights in federally funded programs and activities to people who qualify as handicapped. Section 504 states: "No otherwise qualified handicapped individual in the United States...shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance..."

undue hardship—A recipient shall make reasonable accommodation to the known physical or mental limitations of an otherwise qualified handicapped applicant or employee, unless the recipient can demonstrate that such accommodation would impose "undue hardship" on the operation of its program. The regulations to date provide no precise criteria for determining when the effort to accommodate handicapped people becomes an "undue hardship." This concept will most likely receive added clarity by courts in the future.

viewed in its entirety—This term is used in reference to program accessibility. A recipient's programs and activities are accessible to the handicapped if participation by handicapped people has been ensured when any program or activity is viewed in its entirety. All components of a program or activity, therefore, need not be accessible for program accessibility to be achieved. For example, if a university offers several sections of a particular course, not all sections of the course need be made accessible to handicapped people. If enough sections are accessible to permit full participation by handicapped people, program accessibility will be achieved.

Information Sources on Disability Concerns

The following organizations can provide extensive resources, services, and information concerning disability topics such as education, employment, independent living, and self-care. Call or write these organizations directly.

ABLEDATA System
Adaptive Equipment Center
Newington Children's Hospital
181 E. Cedar St.
Newington, CT 06111
800/344-5405

Source for information on commercially available rehabilitation aids and equipment.

American Association for the Advancement of Science
Project on Science, Technology and Disability
1333 H St., N.W.
Washington, DC 20005
202/326-6400, or 202/362-6667 (Voice and TDD)

American Association for Counseling and Development
5999 Stevenson Ave.
Alexandria, VA 22034
703/823-9800

American Foundation for the Blind (AFB)
15 W. 16th St.
New York, NY 10011
212/620-2000

Association of Handicapped Student Service Programs in Postsecondary Education (AHSSPPE)
P.O. Box 21191
Columbus, OH 43221
614/488-4972

Source of information and services available at colleges throughout the country.

Commission for the Blind
(your state Department of Labor)

Developmental Disabilities Program
(your state Department of Mental Health)

EDC/WEEA Publishing Center
55 Chapel St.
Newton, MA 02160
800/225-3088, or 617/969-7100
(Education Development Center/Women's Educational Equity Act)

Provides grants to develop programs and materials that promote educational equality for girls and women. Offers information on curriculum materials, career development, and staff development.

Foundation for Science and the Handicapped
236 Grand St.
Morgantown, WV 26505
304/293-5201

A network of disabled scientists that advises government, industry, and education on accessibility and support.

Gallaudet College
800 Florida Ave.
Washington, DC 20002
202/651-5000 (Voice and TDD)

A liberal arts college for the deaf. Includes a model elementary and secondary school. Also, a source of information for deaf persons, parents, employers and educators.

G.T.E. Education Services, Inc./Special Net
2021 K St., N.W. Suite 215
Washington, DC 20006
202/835-7300

A computer-based information network on varied topics for special educators.

HEATH Resource Center
One Dupont Circle, Suite 800
Washington, DC 20036
202/939-9320 (Voice and TDD); 800/544-3284 (outside the District ofColumbia)

HEATH (Higher Education and Adult Training for People who are Handicapped) is a national clearinghouse on postsecondary education for disabled people.

Independent Living Research Utilization Project
The Institute for Rehabilitation and Research
1333 Moursund Ave.
Houston, TX 77030
713/797-1440, Ext. 504

Job Accommodation Network
President's Committee on Employment of the Handicapped
P.O. Box 468
Morgantown, WV 26505
800/JAN-PCEH (TTY and TTD)

Mainstream
1030 15th St., N.W., Suite 1010
Washington, DC 20005
202/898-1400
Employment-related services, technical assistance, job referral services

National Alliance of Business
1015 15th St., N.W.
Washington, DC 20005
202/457-0040

Information for employers on varied topics such as accessibility and tax incentives.

National Council on Independent Living
C/O Access Living
815 W. Van Buren, Suite 525
Chicago, IL 60607
312/226-5900

An organization of independent living centers. Provides information and referral services.

National Easter Seal Society
2023 W. Ogden Ave.
Chicago, IL 60612
312/243-8400
312/243-8880 (TDD)

Provides information on accessibility, aids, recreation, attitudes, independent living, rehabilitation.

National Federation of the Blind
1800 Johnson St.
Baltimore, MD 21230
301/659-9314

National Information Center for Handicapped Children and Youth
P.O. Box 1492
Washington DC 20013
703/522-3332

Provides information to parents and teachers on a variety of personal concerns and state and national issues.

National Library for the Blind and Physically Handicapped
Library of Congress
1291 Taylor St., N.W.
Washington, DC 20542
202/287-5100

National Organization on Disability
910 16th St., N.W., Suite 600
Washington, DC 20006
202/293-5960; 202/293-5968 (TDD)

A network of 1700 community organizations across the country. Helps groups and individuals on topics such as education, recreation, employment, accessibility, and accident and disease prevention.

National Rehabilitation Information Center
8455 Colesville Rd., Suite 935
Silver Spring, MD 20910
301/588-9284, or 800/345-2742

National Technical Institute for the Deaf
Rochester Institute of Technology
One Lomb Memorial Dr.
P.O. Box 9887
Rochester, NY 14623
716/475-6400

Provides technical training to deaf and severely hearing impaired students. Trains interpreters, employers, and educators. Provides information, materials, and services related to employment.

Paralyzed Veterans of America
801 18th St., N.W.
Washington, DC 20006
202/872-1300

An information and advocacy agency for persons with all types of disabilities. Publications and information for employers and families on topics such as workplace accommodations and accessibility.

President's Committee on Employment of People with Disabilities
1111 20th St., N.W., Suite 636
Washington, DC 20036
202/653-5044

Provides accessibility information, workplace accommodation networks of employers.

Recording for the Blind
20 Roszel Rd.
Princeton, NJ 08540
609/452-0606

Records and lends educational books to blind and visually impaired individuals.

Rehabilitation International
22 E. 21st St.
New York, NY 10010
212/420-1500

Provides a link between the rehabilitation communities in the United States and other countries. Provides information on travel for disabled persons and audiovisual materials on disabled people and the rehabilitation process.

Services to Crippled Children
(your state Department of Public Health)

Sister Kenny Institute
Division of Abbott-Northwestern Hospital
800 E. 28th St. at Chicago Ave.
Minneapolis, MN 55407
612/863-4457

Provides a continuum of rehabilitation services, research, education information, and audiovisual materials for health professionals, patients and their families.

Social Security Administration
6401 Security Blvd.
Baltimore, MD 21235
301/594-7700; 800/325-0778 (TDD)

Information on disability insurance, benefits, and payments; programs and eligibility. Publishes over 100 booklets and research reports.

Stout Vocational Rehabilitation Institute
Materials Development Center
School of Education and Human Services
University of Wisconsin-Stout
Menomonie, WI 54751
715/232-2195

Rehabilitation services and information for employers and prospective employers.

United Cerebral Palsy Associations
66 E. 34th St.
New York, NY 10016
212/481-6300

United States Department of Housing and Urban Development
Office of the Special Advisor for Disability Issues
Suite 10140, 451 Seventh St., S.W.
Washington, DC 20410-0001
202/426-6030

Vocational Rehabilitation Services
(your state Department of Education)

Additional Resources

The following list includes a variety of resources including catalogs, brochures, books, and periodicals organized under a series of alphabetized topics. For other specialized materials and further resources, see "Information Sources on Disability Concerns," pages 15–17.

Accessibility, Aids, and Appliances

Consumer Care Products, Inc. *Consumer Care Products, Inc.* (catalog) Available from CCP, Inc., 6405 Paradise Lane, Sheboygan Falls, WI 53085; 414/467-2393.

Paralyzed Veterans of America. *Access Information Bulletins*: "Wheel Chair Bathrooms," "Workplace Accommodations," and "Ramps, Stairs and Floor Treatments." Washington, DC: Paralyzed Veterans of America.

Sears, Roebuck, and Co., *Home Health Care.* (catalog) Available from Sears, Roebuck, and Co., Sears Tower, Chicago, IL 60684; 312/875-2500.

Awareness and Theory

Blatt, J., A. Brightman, and M. Sullivan. *Feeling Free.* Reading, MA: Addison-Wesley, 1979.

Bowe, F. *Handicapping America: Barriers to Disabled People.* New York: Harper and Row, 1978.

Browne, S., D. Connors, and S. Sterns. *With the Power of Each Breath: A Disabled Women's Anthology.* Pittsburgh: Cleis Press, 1985.

Cohen, S. *Special People.* Englewood Cliffs, NJ: Prentice-Hall, 1977.

DeLoach, C. and B. G. Greer. *Adjustment to Severe Physical Disability: A Metamorphosis.* New York: McGraw-Hill Book Company, 1981.

Duffy, Y. *All Things Are Possible.* Ann Arbor, MI: A. J. Garvin and Associates, 1981.

International Center for the Disabled and Louis Harris and Associates. *The ICD Survey of Disabled Americans: Bringing Disabled Americans into the Mainstream.* New York: International Center for the Disabled, 1980.

Kushner, H. *When Bad Things Happen to Good People.* New York: Schocken Books, 1981.

National Easter Seal Society. A collection of rehabilitation literature on a variety of topics. Available from N.E.S.S., 2023 W. Ogden Ave., Chicago, IL 60612; 312/243-8400, or 312/243-8880 (TDD).

United Cerebral Palsy Association and Associates. *Programming for Adolescents with Cerebral Palsy and Related Disabilities.* New York: United Cerebral Palsy Association, Inc., and Catherine Lyle Murray Foundation, 1983.

U.S. Government Printing Office. *Directory of National Information Sources on Handicapping Conditions and Related Services.* Publication No. E-82-22007, Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Vash, C. L. *The Psychology of Disability.* New York: Springer Publishers, 1981.

Wolfensberger, W. *The Principle of Normalization in Human Services.* Toronto: National Institute on Mental Retardation, 1972.

Wright, B. *Physical Disability: A Psychological Approach* (2nd. ed.). New York: Harper and Row, 1983.

Career Counseling

Bolles, R. N. *What Color Is Your Parachute?* Berkeley, CA: Ten Speed Press, 1985.

College Placement Council. *The CPC Annual 1988–89: The Career Planning and Placement Guide for College Graduates.* Bethlehem, PA: College Placement Council.

Commission on Professionals in Science and Technology. *Opportunities in Science and*

Engineering. Washington, DC: Commission on Professionals in Science and Technology,1984.

Foster, J., C. Szoke, et al. *Guidance Counseling and Support Services for High School Students with Physical Disabilities: Visual, Hearing, Orthopedic, Neuromuscular, Epilepsy, Chronic Health Conditions*. Cambridge, MA: Technical Education Research Centers, Inc. 1979.

Girls' Club of Santa Barbara. *Choices: A Teen Woman's Journal for Self-Awareness and Personal Planning*. El Toro, CA: Girls' Club of Santa Barbara, Inc.,1984.

Hopke, W. E., ed. *Encyclopedia of Careers and Vocational Guidance*. (6th ed.) (2 vols.) Chicago, IL: J.G. Ferguson Publishing Co., 1984.

Lobodinski, J., D. McFadden, and A. Markowica. *Marketing Your Abilities—A Guide for the Disabled Job Seeker*. Washington, DC: Mainstream, 1984.

Stern, V., and M. Redden. *Scientific and Engineering Societies: Resources for Career Planning*. Washington, DC: American Association for the Advancement of Science, 1980.

University of California. *Careers in Science: A Guide for the Counselors, Teachers, and Parents of Students with Disabilities*. Irvine, CA: University of California, Irvine, 1981.

U.S. Government Printing Office. *Occupational Outlook Handbook*. (1986–1987 ed.) Washington, DC: U.S. Government Printing Office. (029-001-02863-6)

Disability Issues in Science

American Association for the Advancement of Science. *Resource Directory of Scientists and Engineers with Disabilities*. 2nd ed.). Washington, DC: A.A.A.S., 1987.

American Association for the Advancement of Science. *Within Reach: Out of School Science Opportunities for Youth*. Washington, DC: A.A.A.S., 1982.

American Chemical Society. *Teaching Chemistry to Physically Handicapped Students*. Washington, DC: The American Chemical Society Committee on the Handicapped, 1981.

Center for Multisensory Learning. *Science Enrichment for Learners with Physical Handicaps*. Berkeley, CA: Lawrence Hall of Science, University of California, 1978.

_____ . *Science Activities for the Visually Impaired*,. Berkeley, CA: Lawrence Hall of Science, University of California, 1976.

_____ . *Center for Multisensory Learning (CML) Newsletter*. Berkeley, CA: Lawrence Hall of Science, University of California. Periodical.

Heath Resource Center. *Access to the Science and Engineering Laboratory and Classroom*. Washington, DC: Heath Resource Center, 1986.

Smith, L.M. *A College Student with a Disability: A Faculty Handbook*. Washington, DC: Superintendent of Documents, U.S. Government Printing Office, 1980.

Stearner, Phyllis S. *Able Scientists—Disabled Persons: Biographical Sketches Illustrating Careers in the Sciences for Able Disabled Students*. Clarendon Hills, IL: Foundation for Science and the Handicapped, Inc., 1984.

U.S. Department of Commerce. *Science for the Physically Handicapped in Higher Education*. Washington, DC: U.S. Department of Commerce, National Oceanic and Atmosphere Administration, 1979.

University of California. *Careers in Science: A Guide for the Counselors, Teachers and Parents of Students with Disabilities*. Irvine, CA: University of California, Irvine, 1981.

Employment

American Foundation for the Blind. *Visually Impaired Professional Personnel*. New York: American Foundation for the Blind, 1984.

Bowe, F. *Employment Trends: 1984 and Beyond: Where the Jobs Will Be*. Hot Springs, AR: Arkansas Rehabilitation Research and Training Center, 1986.

Bowe, F., and J. Rochlin. *The Business-Rehabilitation Partnership*. Hot Springs, AR: Arkansas Rehabilitation Research and Training Center, 1986.

Greenwood, R., ed. *Designing Jobs for Handicapped Workers: Conference Proceedings.* Hot Springs, AR: Arkansas Rehabilitation Research and Training Center, 1985.

Heath Resource Center. *Tax Incentives and Tax Benefits for the Employers of Disabled Persons.* Washington, DC: Heath Resource Center, 1987.

Occupational Outlook Quarterly. Washington D.C.: U.S. Department of Labor, Bureau of Labor Statistics. Quarterly.

The President's Commission on Employment of Disabled People and the Dole Foundation. *Disabled Americans at Work.* Washington, DC, 1985.

Rochester Institute of Technology. *Tips You Can Use When Communicating with Deaf Employees.* Rochester, NY, 1985.

Terzian, A., and M. E. Saari. *Deafness: A Guide for Employers and Employment Counselors.* Trenton, NJ: New Jersey Department of Labor, 1985.

Parents

Board, M. A., J. Cole, et al. *Independent Living with Attendant Care: A Message to Parents of Handicapped Youth.* Houston: The Institute for Rehabilitation and Research, 1980.

Dinkmeyer, D., and G. McKay. *Systematic Training for Effective Parenting.* Circle Pines, MN: American Guidance Services, 1976.

Greenbaum, J., and G. Markel. *Parents Are to Be Seen and Heard.* Ann Arbor, MI: Greenbaum and Markel Associates, 1985.

Self-help

Board, M. A., J. Cole, L. Frieden, and J. Sperry. *Independent Living with Attendant Care: A Guide for the Person with a Disability.* Houston: The Institute for Rehabilitation and Research, 1980.

Gordon, S. *Living Fully: A Guide for Young People with a Handicap, Their Parents, Their Teachers and Professionals.* New York: John Day Company, 1975. (c/o Harper and Row)

Hale, G., ed. *The Source Book for the Disabled.* New York: Paddington Press, 1979 (Grosset & Dunlap, distributors).

The President's Committee on Employment of People with Disabilities. *Worklife: A Publication on Employment and People with Disabilities.* Washington, DC. Quarterly.

University of California. *Making the Transition: College and Disabled Students.* Irvine, CA: Disabled Students Services, University of California, Irvine, 1985.

Women in Science

Agency for Instructional Technology. ***Women in Science.*** (eight-part video series with resource guide) Bloomington, IN: Agency for Instructional Technology and the University of Michigan, 1988.

American Association for the Advancement of Science. *Bibliography on Women in Science, Engineering, and Mathematics.* Available from the American Association for the Advancement of Science, 1776 Massachusetts Ave. N.W., Washington, DC 20036.

American College Testing Program. *Women in Science and Technology: Careers for Today and Tomorrow.* Available from American College Testing Program Publications, P.O. Box 168, Iowa City, IA 52240.

Center for Sex Equity in Schools. *Women, Math, and Science: A Resource Manual.* 1982. Available from the Center for Sex Equity in Schools, 1046 School of Education, University of Michigan, Ann Arbor, MI 48109.

EQUALS. *An Annotated Bibliography to Assist Elementary and Secondary School Teachers in Sex-Fair Counseling and Instruction.* Available from EQUALS, Lawrence Hall of Science, University of California, Berkeley, CA 94720.

Ehrhart, Julie Kuhn, and Bernice R. Sandler. *Looking for More than a Few Good Women in Traditionally Male Fields.* Project on the Status and Education of Women, 1987. Available from the Association of American Colleges,1818 R. St. N.W., Washington, DC 20009; 202/387-1300.

Emberlin, Diane. *Contributions of Women: Science.* Minneapolis: Dillon Press, 1977.

Gornick, Vivian. *Women in Science: Portraits from a World in Transition.* New York: Simon and Schuster, 1988.

Guidance Associates, Inc. *Challenging Careers: New Opportunities for Women.* Catalyst. Filmstrip and guide available from Guidance Associates, Inc., Communications Park, Box 300, White Plains, NY 10602.

Humphreys, S., ed. *Women and Minorities in Science: Strategies for Increasing Participation.* Boulder, CO: Westview Press, 1982.

Modern Talking Pictures. *Science: Women's Work.* Film available from Modern Talking Pictures Service, 5000 Park St. North, St. Petersburg, FL 33709.

National Council of Teachers of Mathematics. *Equity in Mathematics Project Resource List.* Available from the National Council of Teachers of Mathematics, 1906 Association Dr., Reston, VA 22091.

National Women's History Project. Numerous resources for curriculum and project ideas. Contact National Women's History Project, Box 3716, Santa Rosa, CA 95402; 707/526-5974.

Osen, Lynn. *Women in Mathematics.* Cambridge: MIT Press, 1974.

Research Triangle Institute. *Exploring Careers in Science and Engineering.* Slides, audiocassette, posters, activity guide. Available from Iris Weiss, Research Triangle Institute, P.O. Box 12194, Research Triangle Park, NC 27709.

Smith, W., and K. Stroup. *Science Career Exploration for Women.* Available from the National Science Teachers Association, 1742 Connecticut Ave., N.W., Washington, DC 20009.

Thomas, John W. *Making Changes: A Futures-Oriented Course in Inventive Problem Solving.* Available from ETC Publications, Palm Springs, CA 92263.

Tobias, Sheila. *Overcoming Math Anxiety.* Boston: Houghton Mifflin, 1978.

University of Kansas. *COMETS: Career-Oriented Modules to Explore Topics in Science.* Twenty-four modules including biographical sketches of women in science careers and accompanying language arts activities for junior high school-age students. Available from the Department of Curriculum and Instruction, University of Kansas, 205 Bailey Hall, Lawrence, KA 60045. ERIC: 226-984-1983.

Awaken your students to opportunities in science with...

Women in Science

For junior and senior high school students and adults

This series of eight 30- to 40-minute video programs encourages women to pursue careers in the sciences. More than 40 women role models—professionals and students—discuss their work, career decisions, training, how they finance their education, and how they balance their personal and professional lives. A comprehensive resource guide includes specific information on career outlook, salaries, training, and more.

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Association for Women in Science
Society of Women Engineers

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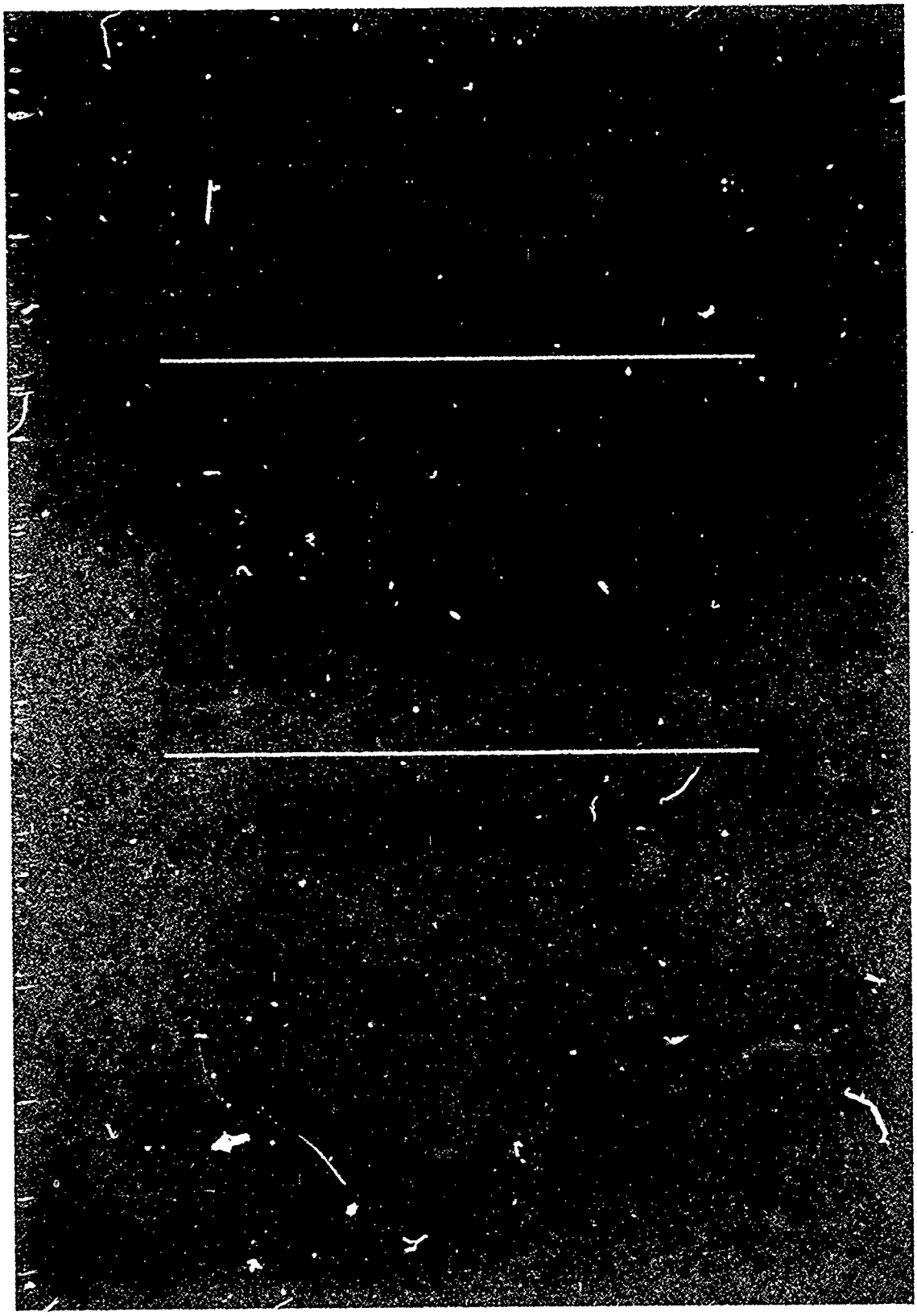

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