1986

Unit on integrated sport/recreation activities for physically challenged persons entry level skin and pre-scuba diving training

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UNIT ON INTEGRATED SPORT/RECREATION ACTIVITIES FOR PHYSICALLY CHALLENGED PERSONS: ENTRY LEVEL SKIN AND PRE-SCUBA DIVING TRAINING

A Project Submitted to
The Faculty of the School of Education
In Fulfillment of the Requirements of the Degree of
Master of Arts
in

Education: Special Education Option

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1986

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PROJECT SUMMARY

Statement of the Problem

Sport/recreation activities provide many benefits for athletes with disabilities; unfortunately, there are not many programs available. The concept of integrated sport/recreation programs for abled and disabled participants combined, is beginning to 'catch' public eye. Research findings suggested that most sports activities can be modified or adapted in order to accomodate people with a disibility. Due to this fact, one might question the need for specially designed programs for individuals with disibilities and consider the potential for developing more integrated sport/recreation programs. Presented herein is a curriculum proposal promoting the concept of integrated sport/recreation among abled and disabled participants. Emphasis was on the ease of adapting already existing programs to accomodate physically challenged people.

Results from the review of related research and literature and pilot projects which advocated the expansion of integrated sport/recreation programs for handicapped people have encouraged this writer to design a curriculum that promoted this concept. This curriculum consisted of five lessons of skin and pre-scuba diving skills. Each lesson contained three working components; technical aspects for the instructor's use, student performances to be accomplished, and evaluation measures for instructor use. Lesson one was a one and a half hour session which introduced basic skin diving equipment, features, and functions. Lesson two

was a two hour session which presented entries, exits, and watermanship skills as pertained to the person with a disability. Lesson three presented equipment use in a six hour time block. Lesson four presented surface diving skills and snorkel clearing techniques within a two hour time sequence. Finally, lesson five incorporated games and circuit practice techniques within a two hour structure. Each lesson included methods of sport adaptation.

Teaching techniques included lectures, discussions, demonstrations, student explorations and discoveries, games, circuit practices and peer tutoring opportunities. The Peer Tutoring component, which also included emphasis on the buddy system, provided unique opportunities for abled and disabled students to work together and assist each other. Skill modifications were included so the activities accomodated all students. Each lesson was task analyzed so individualized instruction could be given to those students who needed extra help.

This project was based on the writer's review and analysis of related research, pilot studies of similar integrated sport/recreation programs, and interviews with professionals involved in integrated sports programs. It should be noted that this unit was not field-tested on a large scale. Only the adapted aquatic techniques used for persons with disabilities were tested. This unit was presented as a point of departure from which future similar projects may expand and improve.

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INTRODUCTION

A majority of persons with physical disabilities do not participate in organized sports and recreation because programs are not available to them.[1] Programs that serve the able-bodied persons generally have not made provisions for including the person with a physical disability. Reasons for this exclusion are due, in part, to certain misperceptions about the handicapped person's abilities to perform, and lack of exposure of abled and disabled to each other in sport/recreation settings. Attempts to change this situation and accept athletes with physical limitations for his/her abilities rather than novelty have begun. Related research reported the development of recreation activities and/or the development of specific skills in sports programs. However, research also indicated that not enough programs attempt to integrate the two areas. Also, many of the programs do not emphasize a transfer of newly acquired skills and activities into leisure-time recreation participation. Consequently, there is a need for more follow-up with many of the existing programs. By continuing the effort to promote and support sport/recreation among disabled people and by providing opportunities for physically challenged people to participate with their able-bodied counterparts, some of the misperceptions regarding abilities of handicapped people can be eliminated. Integrated sport/recreation programs help to facilitate this process.

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[1] Larry D. Irmer, Physical Educational Opportunity Programs for Exceptional Learners (PEOPEL). National Diffusion Network (DHEW/OE), Washington, D.C., August 1980. p.219.

As a result of these issues, this writer will discuss some of the benefits of integrated sport/recreation programs which were presented in the literature. Additionally, the project will include a curriculum design for entry level skin and pre-scuba diving training, in an integrated setting, for persons with physical disabilities. The curriculum will focus on introduction of skills and activities and the participation and practice of these skills in a "buddy" system approach. Student mastery of essential entry level skin and pre-scuba diving skills are two primary goals of this curriculum. Finally, recommendations for extended training and participation in skin and scuba diving in community-based programs will be included.

It is important for all persons to have opportunities and training in sport/recreation. A person with a physical disability should not be excluded from having needed physical exercise and/or the social encounters associated with leisure-time activities.

REVIEW OF THE RELATED LITERATURE

Integrated recreational programs for persons with disabilities are more beneficial toward improving self-esteem and social awareness than are programs which have been especially created to service disabled people. Sport/recreation literature and related research suggested that abled and disabled persons who particiapted in integrated recreational programs gain many benefits. These benefits are realized through: enhanced socialization and desensitized attitudes, eliminated misperceptions about the physically handicapped athlete, and increased mobility within the community and usage of existing facilities. Though programs which have been especially created to service disabled people are useful, they inhibit the handicapped person's assimilation into the mainstream of society in leisure-time related activities; they do not render the benefits of integrated programs.

Enhanced socialization and desensitized attitudes toward physically challenged persons are direct results from integrated recreational programs. Before these gains can be realized; however, there needs to be an understanding of the reasons why such benefits are not more widely seen. Presently, the majority of individuals with disabilities do not participate in organized sports and recreation simply because programs are unavailable to them; and, programs servicing the able-bodied have made no provisions for athletes with disabilities.[1] Additionally, advocates of people with disabilities have not become geographically comprehensive. Thus, many exceptional athletes are excluded.

Probably what comes to mind when one thinks of programs available to athletes with disabilities are Special Olympics and other Foundation-sponsored events such as the Wheelchair Marathon and Wheelchair Basketball leagues. Many physically handicapped persons do have the opportunity to participate in sport activities through these events. Their participation in these events does indicate the importance of having opportunities to perform athletically. Additionally, foundation-sponsored events provide a means for drawing public 'eye' to the cause. However, proponents of integrated recreational opportunities criticize Special Olympics; and the like, for their segregation appearance.[2] Generally, recreation program offerings do not include adapted activities that could accomodate physically challenged people. The American Red Cross is the exception as aquatic activities adapted for the person with physical limitations are offered. These adapted classes are only offered, however, when there is a demand; and, in most cases the demand for these activities is very minimal.[3] Most sports can be adapted with minimal effort for persons with physical disabilities. By adapting existing sport/recreation activities, recreation providers would not need to design special activities for handicapped people. Research findings from the 1983 Winter Park Seminar, Winter Park, Colorado, concluded that adapted sports for physically challenged people are a viable alternative to segregated sports activities.[4] Also reported from the seminar findings was that special adaptations to sport activities present many challenges to the sports providers; involving many people in

the process.[5] Some researchers reported using an athlete profile sheet (see appendix A) to collect pertinent information about the participant and to note the abilities, disabilities, interests and needs.[6] Dr. Larry Carmichael from the University of Vermont, Special Education Department, reported in an interview that his program used the informal athlete profile sheet to help determine client needs and to facilitate in the activity placement process. Dr. Carmichael also reported that the athlete profile sheet was helpful to the responding recreation facility in their activity planning.[7] The disability of a participant needed to be accurately assessed and precautions needed to be indicated; but, unnecessary restrictions were to be avoided in the activity planning for the persons with disabilities.[8] The researchers indicated that quite often disabled athletes were more able than others speculated. An example of this fact is the results of a study conducted by the University of Washington, College of Education. The study was a three year swimming project to teach instructional objectives to deaf-blind, severely-to-profoundly retarded students, using non-handicapped high school and college students who were trained and paid as peer tutors. The report concluded that though the handicapped students took longer to learn the skills, they did make gains in gross motor, communication, and social interaction.[9] Socialization processes were greatly enhanced between students and tutors. The final report also included a question and answer section from the peer tutors. When asked if she had a different reaction to handicapped people she meets in the community, one

tutor replied,

> "I definitely do. We have some handicapped people at our school who are in wheelchairs and I was always afraid of them. I was mostly afraid because I did not know what to do. And now I find that I haven't got the fear that I had before. And I don't go out of my way-- now that I'm not afraid or go up to them all the time and want to talk to them, but I treat them like I would anybody else."

Another tutor was asked what he learned from his experiences with disabled youth and he replied, "Different ways to accept people." A desirable outcome from any integrated recreation program would be that individuals accept each other inspite of one's handicapps and develop a respect for human worth.

The socialization enhancement and desensitizing of attitudes could be expanded if organizations that support the disabled athlete, such as: The National Wheelchair Athletic Association, The National Foundation for Sports for the Cerebral Palsy, The National Foundation of Wheelchair Tennis Association and The Handicapped Scuba Association; and many more, could form a centralized organizing body and expand geographically.[10] Many athletes with physical disabilities are excluded from participating in sanctioned sports events because of location difficulty or lack of publicity and public dissemination. The problem can be corrected. There is a need for more community exposure to the disabled athlete and exposure of the athlete to the community. Quality media coverage, education and advocacy are ways to achieve this goal.[11] The disabled athlete should have more opportunities to participate in regular sports events and compete with abled and other disabled. Some modifications would need to

be

be considered to insure competitiveness. Presently, whenever there is a major sports event, such as the 1984 Olympics or City marathons such as was held in Los Angeles in 1985, little attention is devoted to the disabled participants. Media coverage of an athlete with a physical disability is usually ornamental in nature; the physically challenged athlete is largely still regarded as novelty and not as true athletic competitor.[12] Public education can be very instrumental in presenting and advocating this concept of disabled athlete participation. An educated public will expect more fact than fantasy, thus media coverage of all athletes' performances will become more equitable. The possibilities to provide integrated and adapted physical education programs within the school curriculum are significant. Some children in the public schools are already receiving this service. Certainly, the efforts can be expanded, however. Schools have the advantage of being able to incorporate a transdisciplinary approach to teaching; whereby, many professionals work together to coordinate programs and share expertise. The scope of professional involvement, to include teachers, counselors, coaches, doctors and recreation specialists, needs to expand in order to insure public awareness and to eliminate attitude and socialization barriers. Programs that integrate the physically handicapped person into community recreation programs are also ways of informing the public and desensitizing attitudes.[13] Many of the same advantages exist with public recreation as exist with public schools. The people, the expertis, the facilities, and the programs are already in place. The operation need only to continue but with

minimal changes or adaptations.

Bringing about a philosophical change in attitude toward athletes with physical disabilities will take time. One must examine the worth of separate athletic events, exclusively for handicapped or investigate the advantages of integrated sport/recreation programs as an alternative. Research suggested that enhanced socialization and desensitized attitudes toward physically challenged persons are benefits which resulted from integrated sport/recreation programs. One might consider these benefits in accepting a new philosophy or in questioning an old one.

Another important benefit which resulted from integrated recreation programs is the elimination of certain misperceptions about athletes with physical limitations. When physically challenged persons have the opportunity to participate with able-bodied persons in recreational activities, their physical fitness abilities soon overshadow their disabilities. Joseph P. Winnick and Francis X. Short, authors of the book Physical Fitness Testing of the Disabled: Project UNIQUE, best described this fact when they remarked, "...there are many more similarities than differences between individuals with handicapping conditions and individuals without handicapping conditions." Project UNIQUE was a three year study which investigated and contrasted the physical fitness of normal, sensory, and orthopedically impaired youth in hope of developing a comprehensive physical fitness program/test. Goals of the project were to determine status and unique needs, if any, of individuals with sensory and orthopedic impairments as well as for nonimpaired individuals;

and, to improve the overall physical fitness of individuals.[14] Prior to the development of Project UNIQUE, there were no quantitative tests of standardized measures for youth with orthopedic conditions. No special standards or modifications specifically geared to the American Alliance for Health, Physical Education and Recreation (AAHPER) Health Related Test relative to the sensory or orthopedically impaired had been developed.[15] This fact may indicate that certain misperceptions existed about the fitness and abilities of handicapped students. However, in recent years and as a result of the Project UNIQUE, these misperceptions of the handicapped person have diminished. The physical fitness of the person with disabilities is an important issue. As one might have expected, a review of the Project UNIQUE fitness test performance of handicapped children indicated that their fitness level fell below that of nonimpaired children.[16] Winnick and Short emphasized throughout their book that the development of strength, endurance, cardiorespiratory endurance and flexibility are just as, if not more, important for handicapped individuals as they are for nonhandicapped persons. They also stressed that a good activity for the improvement of these health factors is swimming. The buoyancy of the water helped to support the individual and aided in the exercising of weakened muscles. Conversely, the resistance supplied by the water helped to develop the participant's strength and endurance. Circulation improved as did ventilation as a result of water activity and water pressure on the person's trunk. Additionally, skin and scuba diving provided another dimention to sport challenge.

A person who explores these activities gains a lot of self-confidence by participating in the challenge of sport diving. Jim Gatacre, founder of the Handicapped Scuba Association and Scuba instructor, has been instrumental in opening up the sport of scuba diving to disabled people. He has taught diving to people with disabilities since 1975; and, he is presently promoting handicapped diving around the world.[17] Jim Gatacre has helped to change people's misperceptions about disabled people being able to dive. He has done this by conducting integrated classes of able-bodied and disabled students. Gatacre probably best illustrated the point of forgotten misperceptions when he expressed his feelings in a Los Angeles Times interview by saying, "In a water environment, there seemed to be little, if not any, barriers between those who could or could not walk; almost a physical equality existed between abled and disabled people." One of Gatacre's former students expressed his feelings of self-confidence in the same article by saying, "Scuba diving is one sport that's enabled me to maintain a high level of achievement; of feeling good about myself."

Certainly, all the misperceptions about athletes with a physical handicap that the public has can not be eliminated by limited exposure to success stories about disabled people and their sports quests. What one can hope for, presently, is that because of this exposure and an increasing public awareness, an understanding and appreciation for disabled athletes can be gained by a larger part of the society. The increased participation of physically challenged persons in integrated sport/recreation

programs can help revolutionize attitudes toward the athlete with physical limitations and minimize certain misperceptions.[18]

When one considers the limited availability of adapted sport/recreation activities for handicapped people, and the limited opportunities for the person with disabilities to participate in sanctioned sports events; one can begin to realize the benefits of integrated recreation programs. These programs which have adapted sports to accomodate the person with physical limitations provided greater opportunities for mobility among the community and usage of already-existing facilities.[19] City facilities such as pools, parks, clubs; as well as, health clubs, spas, and organizations, are in business to provide recreation/sport activities. They also have the staff who are professionally trained to instruct or lead activities. Logistically and economically the most effective approach was to take advantage of these available resources within the community. The need for facility and personnel duplication was eliminated in addition to extra costs. Research supported that, greater cost effectiveness resulted when additional training of existing personnel was provided rather than creating all-new programs and support for them.[20] The physically challenged population is not usually concentrated in one geographic area within a community. Any specially created facility and/or programs would be limited in accessibility to the special needs group. However, by being able to utilize the many facilities and participate in existing programs within the community network, the physically challenged increased their opportunities for mobility throughout their community. Integration into the

community was being facilitated; public awareness was being heightened.

A cooperative effort is needed in any community which impliments integrated sport/recreation programs for people with disabilities. The planning and logistics for program production of this nature are extensive but so are the social benefits which result from this effort.

Much of the research regarding integrated sport/recreation programs for physically disabled people has concluded that these programs are more beneficial toward the overall improvement of self-esteem and social awareness of this population group than are programs which have been especially created to service only disabled people. Research suggested that the benefits are manifested through enhanced socialization and desensitized attitudes, eliminated misperceptions about the disabled athlete and increased mobility within the community and usage of existing facilities. Though these benefits are realized in varying frequencies and different degrees, they all contribute to physically challenged person's assimilation into the mainstream of society in a positive way. Enhanced socialization and desensitized attitudes are a direct spin-off from the integration of able-bodied and disabled students participating in integrated sport/recreation activities. Quite often, sports activities promote feelings of friendship, competition, and respect for individual differences. Attitude barriers begin to fade when emphesis is focused on one's abilities and not on one's disabilities. The elimination of misperceptions about disabled athletes is a gradual process. It

is a process that parallels the gradual increases in opportunities for handicapped people to participate in recreation activities with able-bodied people. A disabled person must have opportunities to demonstrate his/her capabilities so certain misperceptions about their abilities can be understood without reservation. Finally, increased mobility within a community and usage of existing facilities is a benefit realized through cooperative involvement between community programs and personnel. Additionally, the social benefits for all are greatly enhanced by the heightened exposure of the person with physical limitations to the community and of the community to these people.

One can view the evidence presented in this discussion of integrated sport/recreation programs for physically handicapped people and determine that the benefits are worth continuing the effort. Eventually, the misconception about disabled athletes as novelty will cease and they will be recognized as true competitors. According to research, the models for a firm foundation have been laid and integrated sport/recreation programs should be encouraged to continue. Community sport/recreation programs need to take a first step in promoting this concept. Providing opportunities for additional training in adapted sport and recreation for existing personnel is a good begining. Contacting schools and universities and coordinating efforts among personnel in order to utilize a transdisciplinary approach to establishing better programs is another avenue. Finally, quality advertising to the public through the media is an effective way to widely promote the concept, and stimulate public awareness. Once the process has begun, the momentum for continuing will endure.

Endnotes

1 Larry D. Irmer, Physical Educational Opportunity Programs for Exceptional Learners (PEOPEL). National Diffusion Network (DHEW/OE), Washington, D.C., August 1980. p.219.

2 Interview with David Jones, Ph. D., Kelvin Grove College of Advanced Education, University of Brisbane, Australia, 25 October 1985.

3 Marylou Smith, "Competitive Swimming," Sports 'N Spokes, October 1977, pp. 66-67.

4 U.S. Department of Education, National Institution of Education, Sports and Recreation Programs for the Child and Young Adult With Physical Disabilities, (Winter Park, Colorado Conference Proceedings, 1983), pp. 38-39.

5 Ibid., p.40.

6 Larry Carmichael, Ph. D., "Integrating Persons With Varying Disabilities Into Community Recreation," Physical Activities for the Exceptional Individual (Aneheim: 14th National Conference on Physical Activity for the Exceptional Individual, 1985), pp. 67-77.

7 Interview with Larry Carmichael, Ph. D., University of Vermont, 25 October 1985.

8 U.S. Department of Education, National Institution of Education, Sports and Recreation Programs for the Child and Young Adult With Physical Disabilities, (Winter Park, Colorado Conference Proceedings, 1983), pp. 74-75.

9 Marie Thompson, Integrated Educational/Leisure Time Model for Deaf-Blind Children and Youth, (Washington, D.C., August 1983), p. 5.

10 Denis Graver, "HSA Promotes Diving to Handicapped Youth," NDA News, July 1985, p.10.

[11] Ibid., p. 10.

[12] "Wheelchair Sports and Recreation," Sports 'N Spokes, July/August 1985, pp. 17-20.

[13] Carmichael, pp.120-121.

[14] Joseph Winnick, P. Ed. D., and Francis X. Short, Physical Fitness Testing of the Disabled: Project Unique. (Illinois: Human Kinetics Publishers, Inc., 1985), p. xv.

[15] Ibid., p. 1.

[16] Ibid., pp. 1-8.

[17] Interview with Jim Gatacre, Founder, Handicapped Scuba Association, LaJolla, California, 11 November 1985.

[18] John Charters, "They Said We Couldn't Do It," NDA News, November 1985, pp. 18-19.

[19] U.S. Department of Education Institute of Education, Maine-Niles Association of Special Recreation, (Washington, D. C., Government Printing Office, 1976), p. 8.

[20] Thompson, pp. 65-66.

LONG TERM GOALS

The desired long term goals to be accomplished by the end of this unit are to:

1. enhance socialization through participation with able-bodied students in an integrated sport/recreation activity.

2. improve overall physical condition of all participants, especially the disabled athlete.

3. promote feelings of achievement and improved self-confidence through the acquisition and mastery of new aquatic skills.

4. improve community awareness of the disabled athlete by integrating abled and disabled in sport/recreation activity and by preparing the disabled athlete for additional recreation activities within the community.

5. provide follow-up recommendations for continued aquatic sport training within the community.

This project is designed to be used by physical education and adaptive physical education instructors, coaches, and recreation personnel. The setting for the program could be a regular school program, an after-school sports program or a recreation and parks department program.

PROJECT DESIGN

This project was designed to be used by physical education instructors, adaptive physical education instructors, coaches, and recreation personnel. The concept was to present entry level skin and pre-scuba diving skills, in an integrated setting, to the disabled athlete in grade levels six through eight and nine through twelve. A desired outcome of the project was the hope that greater opportunities for the disabled athlete to be assimilated into ongoing community sport/recreation programs would result.

The project was designed to be an instructor's guide which consisted of the following components:

Technical Aspects- Instructor

comments- facts to be aware of, logistics needs

Techniques- methods to be used, the actual skill formula

Activities- student performance tasks

Student Requirements

Enabling Objectives- the desired short term outcome

Task Analysis- components of the skills to be accomplished

Peer/Buddy Assignments- abled and disabled students share the responsibilities and assistance of helping each other

Evaluation- Instructor

Teacher Observations- student performance of objectives through the

task analysis

Tests- there were two written tests to measure cognitive knowledge of terms, facts, and procedures

These components were part of each of the five lessons. The five lessons included: introduction to basic skin diving equipment, entries, exits, and watermanship, equipment use of mask, snorkel, and fins, surface diving with displacement clear, and games, circuit, and conditioning. Finally, the project consisted of several appendixes. Included in the appendixes were student profile and survey sheets for early assessment of potential candidates, information sheets on floatation devices, and other useful pool equipment, and finally, a bibliography of books, audiovisuals, products, and organizations for follow-up information of the sport.

A recommended length of time for presenting the unit was difficult to establish. However, 13.5 hours of total instruction time could be calculated for all five lessons if no other factors were considered. The curriculum setting is an important factor to consider before establishing schedule length. For example, if this unit was taught as an after-school sport, coaches might only be able to conduct classes for an hour a day. The unit would extend for approximately two weeks. If it was taught as part of a regular physical education class in school, there would be even less actual participation time; approximately 1/3 the time of an after-school program. Therefore, the unit might extend from five to six weeks. Finally, if the unit was taught in a recreational setting, and if pool time was available, the course would extend one to two weeks.

The project was designed to merely introduce basic skin and pre-scuba diving skills and was not intended to teach every aspect of the sport. It was intended to keep the skills basic so that all students would be able to master the skills by unit's end. The curriculum was designed to incorporate many methods of presentation. Lectures, demonstrations, student exploration and discovery, games, and circuits, and peer tutoring were some of the approaches implied in this unit.

STATEMENT OF LIMITATIONS

There is no one way to design an aquatics program for people with physical disabilities so that it can accomodate all the many disabilities. This fact is the biggest limitation to this project. Synonymous to the idea of the individualized approach is the idea of individual differences. Another limitation might be that categories and labels often cause instructors to expect typical behaviors or performances from their students. It is vital that instructors need to look beyond the disability and relate to each student individually. Once a relationship is established between student and instructor and student capabilities are assessed, a baseline capacity can be determined for expected performance. Realistic goals can then be set for each student. Another limitation is the number of students who will be able to participate in this kind of program. Student-instructor ratio for community skin and scuba diving courses is 8-1 or slightly higher if certified assistant instructors are used. Finally, techniques are limited to assist those students who are paraplegic. Other people with disabilities may also benefit from such a program but they are not directly addressed.

PURPOSE OF THE PROJECT

The purpose of this project is to present entry level skin and pre-scuba diving skills, in an integrated setting, to the disabled athlete in order to provide greater opportunities to be assimilated into ongoing community sport/recreation programs. Many benefits are realized through participation in leisure-time activities. Through this project, perhaps individuals can see the potential for integrating the disabled person with able-bodied people in sport/recreation activities and encourage the development of such a concept.

PARTICIPATION POSSIBILITY CHART

The following chart contains excerpts from the participation possibility chart developed by the members of the Winter Park, Colorado, Winter Park Seminar in April, 1983. The origional chart listed eighteen disabilities and thirty-six sporting activities which were compatible. These excerpts are only those sporting activities that pertain to aquatics. It is interesting to note that most of the eighteen disabilities from the origional list are campatible to the aquatic activities. In conclusion, water activities appear to be appropriate for disabled persons' inclusion.

The following information is an excerpt from the Participation Possibility Chart from the Winter Park, Colorado Proceedings, held in April, 1983.

Disability	Scuba Diving	Swimming
Amputations		
Upper Extremity	R	R
Lower Extremity	R	R
Cerebral Palsy		
Ambulatory	I	R
Wheelchair		I
Spinal Cord Disruption		
Cervical	R	R
High-thoracic	R	R
Low thoracolumbar	R	R
Lumbosacral	R	R
Neuromuscular Disorders		
Muscular dystrophy	I	R
Spinal muscular atrophy	R	R
Ataxias	R	R
Others		
Osteogenesis imperfecta	R	R
Arthrogryposis	R	R
Juvenile rheumatoid arthritis	R	R
Hemophelia	R	R
Skeletal dysplasias	R	R

R= recommended

I= individualized

Blank= no information or not applicable

Termonology

Termonology that is used throughout this unit is listed below. The instructor might find it helpful because some of the words are diving idioms that have a different meaning from standard dictionary explanation.

ascent- the approach from a depth to the surface of the water

blade- the extended part of a fin or flipper from the foot pocket

blast- a method of clearing water from a snorkel much like shooting a pea from a shooter

bicycling- an improper form of kicking with fins on, a motion like that of pedaling a bicycle

breaks surface- when a diver ascends to the surface and levels out to continue swimming on the surface in a prone position

buddy- a partner who participates with another in the sport of diving

buddy system- a way of practicing safety in diving whereby pairs of indivuals maintain close proximity and lend aid and assistance to each other during activity

circuit- a form of repetitious practice

clear- refering to the snorkel, to rid the snorkel of any residual water after surfacing from a dive

conditioning- swimming for an extended period of time in order to build endurance and improve cardiopulmonary response

defog- to apply a substance to the inside of a mask to keep it from becoming obscured by nose vapor

descent- to leave the surface of the water and to go downward

do-se-do- standing arm and arm and facing each other as if in square dance fashion

ditch- to get rid of equipment that one is wearing, to take it off

displacement- a form of getting residual water out of snorkel upon breaking surface by tilting head back while ascending

displacement- and exhaling. As the water is gently forced out, aided by gravity, this method is displacement

dolphin- a form of body propulsion that is caused by an upward and downward body movement

don- to put gear on

entry- a way of getting into the water from the deck or some other surface

equalize- a method of causing the pressure imbalances to balance

exit- getting out of the water

face front- this is the ready position that students assume, they face the direction of the instructor or person giving directions

foot pocket- the part of a fin where the foot is inserted

gear- the equipment being used for a diving activity

limit of comfort- a measure of a person's feelings regarding comfortable physical output while doing an activity; a point not to be exceeded

pool's edge- the recovery point or home of reference where a student should end up after an activity unless told to be elsewhere

pressure- a force that is pushing inward or outward or from all all directions

purge- a device found on some snorkels that allows water to escape from within the lower section

prone- a face down position in the water

snake- an up and back movement of swimming within a pool usually from one end of the pool to the other

surface interval- any time spent on the surface, out of the water

supine- a sitting position within the water, legs are bent with knees up toward chest

Activity: Aquatic Sport
Unit on: Skin and Pre-Scuba Diving
Grade Level: 6-8, 9-12

Introductory Statement:

The disabled person who participates in aquatic sport/recreation activities is likely to experience many social and physical benefits. Skin and pre-scuba diving training can prepare the disabled person for further undertaking in the sport of scuba diving in a regular community setting.

Instructional Content:

The unit includes series of enabling objectives stressing skills and safety aspects as well as theory and definition of terms. The task analysis section indicates student performances. The buddy system is introduced and used throughout the unit. Cognitive aspects of the sport are emphasized by utilizing enabling objectives related to personal safety, gear identification and maintainance, underwater environment, and physiology.

Peer/Buddy Assignment:

The "buddy" system utilizes pairs or small groupings of students working together through all skill exercises. The idea is to pair abled and disabled together, rotate the assignments throughout the unit, and give all the opportunities to work together. The buddy system also helps to insure safety.

Comments, Techniques, Activities

Comments:

Prior to beginning this unit, the instructor should conduct an informal assessment and screening procedure of each student participant. The athlete profile and survey sheets are to be used for this purpose (see appendixes A,B). A medical history form should be completed by each participant and a physical exam is recommended. Parental permission should also be secured. A determination should be made that each of the students must:

1. have sufficient self-help and daily living skills for dressing, ambulating, transfering; and, require minimal assistance or none at all for these tasks.

2. be in sound physical shape, as determined by survey forms and medical history form or physical exam which was signed by a doctor.

3. have some watermanship abilities in order to float, bob, recover from a prone position, and blow bubbles face down in the water and propel.

The aquatic instructor must keep in mind that there is no single way to teach aquatic activities to the disabled. One must try to individualize approaches as often as possible, use varying teaching techniques and keep realistic expectations for each individual participant. Also, the instructor should keep the students' interests in mind. Students want an enjoyable, successful experience so in order to help them achieve these desires, the instructor must:

1. provide enough time for students to become acclimated to the new environment.

2. provide ample opportunities for practice.

3. recognize each student's own 'limit of comfort'

Techniques:

Abled and disabled will participate together and by utilizing the buddy system they become responsible pairs in working on the skills. The instructor will use a combination of teaching techniques. Some of these techniques are lecture, demonstration, peer demonstration, student exploration and discovery. There will be classroom or on-deck skills presented as well as water demonstration and practice. Evaluation will be an ongoing process, especially of the watermanship skills. Mastery of a skill will be determined by objective performance and as determined by instructor. Testing of cognitive skills will be an ongoing process as well. The instructor has the option of presenting oral or written evaluation of cognitive skills. The nature of the program setting will determine which kind of cognitive testing method is to be done. For example, an after-school program might require that testing be done orally. A regular physical education program might require that grades be kept so testing would need to be done by writing. Finally, as often as possible, the instructor should try to individualize the instruction to meet the needs of each individual student.

Activities:

Students will become familiar with three essential pieces of of skin diving gear. These pieces are the mask, snorkel and fins. The students should have a general idea of the features and functions of these pieces of equipment. There are many varieties of masks, snorkels and fins, but for the purposes of this unit, one need only to discuss minimum aspects of the equipment. The following is an

outline of the basic features and functions of the three pieces of skin diving equipment:

	Features	Function
Mask	- tempered safety glass	enables one to see clearly underwater
	- low volume has less air space between face and lense, less vision scope	easier to clear underwater
	- large volume has more air space between face and lense, more vision scope	more difficult to to clear underwater
	- some masks have purge valves on lense plate to make underwater clearing easier	aids in getting rid of water in the mask while underwater
	- solid or split head strap	to hold mask on head

* other features include wrap around style, nose piece or finger pocket, edge seals and prescription lenses

Snorkel	- some are J-shaped, some are flexed, some are a wrap around	aids in breathing while resting head on surface and allows person to watch bottom while swimming
	- the diameter or bore, of some are large and some are small	larger bores are easier to breath through but smaller bores are easier to clear of water.
	- all snorkels have a tab	used to hold snorkel on to mask

* some snorkels have contoured mouthpieces and moldable teeth grips to allow for snorkel positioning and comfort

Fins	- full foot style	to cover and protect entire foot
	- open heel style	to be worn with other kinds of foot protection such as booties
	- some have vented blades some do not	used to provide thrust and mobility through the water

* for the paraplegic, fins may provide a reference of feet, protection

SKILL: Introduction to basic skin D. equipment LESSON 1 1.5 hrs.

EQUIPMENT NEEDED Mask, snorkel with keeper, fins, a variety for demo.

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
1. given instruction student will be able to name three essential pieces of skin diving equipment	1. students will inspect the equipment items mask, snorkel, fins with their buddy a. the students will tell which piece of equipment is being described by the instructor when such questions are asked: - it can be low or large volume, what piece of equipment is this? - student questioned would respond, "a mask"	1. buddies will examine the skin diving gear for approximately 5-10 minutes. They will then list the features they noticed - this activity can be done in writing or done orally, and completed in buddy pairs
2. given instruction student will be able to discuss the visible features of the mask, snorkel and fins	2. students will be able to tell the following about each piece of equipment: Mask- tempered glass, low and large volume, has a head strap, purge valve Snorkel- J, flex, wrap shaped, large and small bore, all have tabs Fins- full foot, open heel, solid or vented blade * some students might be able to tell more about each piece of equipment from any secondary (*) information instructor provided	2. the buddy pairs might want to share their answers with other students in an oral discussion
3. given instructions students will be able to list one function for each piece of skin diving equipment- mask, snorkel, fins	3. students will tell an important function of each: Mask- enables one to see clearly underwater Snorkel- enables one to rest head on surface, breath without lifting head from water	3. Students can match description of item with function, solve a crossword-type activity, orall compare their answer on chalkboard with other students,

SKILL: Introduction to basic skinD. Equipment LESSON 1 cont.

EQUIPMENT NEEDED Mask, snorkel with keeper, fins, a variety for demo.

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
3. Function cont.	3. Fins- enables one to propel through water easier, provides foot protection	3. In buddy teams students may be tasked with an assignment to locate a particular style of equipment based on the kinds of features and functions they are asked to look for on each item. For example, if students have opportunity to visit a dive shop, they must then find a type or brand of mask that has: low volume, slit head strap and purge valve on face plate. They will then find a mask that has these features and write down the name. They will be able to see what features are most available on the many different kinds of masks. Often, dive shop operators will bring a variety of equipment on location for a demonstration.

Comments, Techniques, Activities

Comments:

Once students have had an introduction to three basic pieces of skin diving equipment they need to be instructed on how to purchase the right kind of equipment for themselves. Brand names are not always the best buy as far as individual taste. Two important facts to consider when purchasing equipment are comfort and fit. Safety is also a consideration but this aspect is delt with more when scuba equipment is discussed. However, if equipment is comfortable and if it fits, then in practicality it is likely to be safe.

This next lesson will deal with aspects of selection and care of equipment. Students will be introduced to some simple techniques for determining fit and comfort. The following is an outline of some basic considerations for mask, snorkel, and fins selection (to include fit), and care.

	Selection and Fit	Care
Mask	. has desired features one wants . Place mask up next to face w/o strap . Inhale through nose/forms suction . Remove hand slowly but be ready to catch mask if it falls . If mask stays up next to face, it has a good fit *facial hair interfers with this method of testing	. avoid long exposure to sunlight . rinse thoroughly in fresh water (chlorine and salt water can do great damage) . do not crush in storage and . keep in cool,dry place * for defogging the mask, commercial solutions are available but more commonly used are . shampoo and saliva.

	Selection and Fit	Care
Snorkel	. has large to medium bore (opening diameter) to allow for slow, relaxed deep breaths . snorkel mouth piece should fit person's mouth so that a watertight seal is made and so that removal is easy . easily accessible when needed and out of the way when not needed.	. avoid long exposure to direct sunlight . rinse in fresh water . do not crush in storage . keep in cool, dry place

*the jaw should be relaxed when snorkel is in mouth if lips have to clench and teeth tighten around it, it is too small. If it is hard to remove, it is too big.

. a snorkel keeper holds snorkel to mask in a position so that it is easily accessible

*some snorkels are flexed, some are contoured, and some are J-shaped the contoured and J-shaped deliver the smoothest air flow to the diver

Fins	. fin should fit in accordance to size of diver, example, if person is large then the blade of fin should be large for maximum thrust in water. Smaller persons should use a fin with a smaller blade . foot pocket should fit to size of foot so that rubbing does not occur. The use of socks or booties (diving booties) should be encouraged to aid in the protection of chafing . for person with leg immobility the fin serves as a protection more than for propulsion so a smaller fin is recommended and one that is a full foot fin . also, a small fin, with open heel and use of booties is a possible recommendation for the paraplegic	. avoid pulling straps to put fins on . lay flat in storage . avoid prolonged exposure to direct sunlight . rinse thoroughly in fresh water after use

SKILL: Introduction to basic skin D. Equipment LESSON 1

EQUIPMENT NEEDED variety of masks, fins, snorkels

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
4. given instruction and participation, the students will care for the equipment during the unit by achieving the task analysis	4. the students will: - participate in lecture and discussion - use equipment that properly fits and is comfortable for them - clean and properly store all equipment after each use - notify instructor of equipment that shows wear or damage	4. early on in the program have buddy pairs become responsible for making buddy checks of each other's equipment before use to insure proper fit (especially if studer is using borrowed or rented gear) and condition
5. given the instruction and participation students will be able to list the functions, features selection (to include fit) and care of three essential pieces of skin diving equipment and obtain a passing score on a written or verbal quiz	5. students will answer a series of questions regarding function, features, selection(fit) and care. They may write or recite their responses. (Quiz #1)	

Equipment
Quiz #1

DIRECTIONS: In the spaces provided, list two (2) each of the functions, features, selection (to include fit) and care of the three pieces of skin diving equipment.

	FEATURES	FUNCTION	SELECTION	CARE
MASK	1. 2.			
SNORKEL	1. 2.			
FINS	1. 2.			

Comments, Techniques, Activities

Comments:

Entries and exits into a pool are generally not considered a risky skill for aquatic participants. However, an instructor must exercise caution and take all necessary safety steps when the participant has physical limitations such as the paraplegic. The following discussion will provide information to the instructor for insuring safe entries and exits for the disabled participant.

Additionally, an important fact to consider before the instructor requests students to enter the pool is to make sure that water temperature is between 80-90 degrees if possible. Warm water helps to relax spastic muscles and aids in greater range of motion possibility. All pool sessions should include availability of lifesaving equipment. (See appendix D,E for information on commercial entry/exit equipment)

Techniques:

There are several ways for a disabled person to enter and exit the water safely either by him/her self or with the assistance of a buddy or the instructor. Following some general safety-assists techniques are recommendations from aquatics manuals and adapted aquatics instructors for improvised entries and exits. These techniques could be used if commercial lifting devices are unavailable.

General Safety-assists-

- one person standing adjacent to one entering and exiting from tier and/or ladder
- one person standing to the rear of person entering and one person in water in front of person entering

Techniques contd.

. student entering should grip shoulders of in-water helper

. helper should grip armpits of student entering water after student places their hands on helper's shoulder

. in-water helper should assist student in locating pool's edge after entering water if necessary

. helpers are present when necessary for all entries and exits

. exits are often the reverse procedure of entries and require helper assistance

Improvised entries/exits:

Wheelchair entry-

. two helpers required

. move wheelchair to pool's edge and lock brakes

. one helper stand behind chair and hold handles

. one helper positioned in water

. student pushes off from chair into water

. in-water helper assists student to pool's edge if necessary

Straight Chair entry-

. four helpers required

. chair brought to pool's edge and tipped back while one helper supports chair from the back and one in-water helper supports chair

. two more helpers enter water and the three assist in lowering chair into water while on-deck

Improvised entries/exits contd.

Straight Chair entry-

- helper supports chair
- in-water helper directly in front of student grips armpits of student and eases him/her away from chair and over to pool's edge if necessary
- chair is removed from pool and placed at a nearby poolside location

Exit pool back to Wheelchair-

- often, the students may be able to bump themselves up pool steps or transfer tier and into their wheelchair which is adjacent to deck, helpers are usually required
- helpers may assist with a lift of the student from the pool but helpers must be strong enough to to do the lifting and must be careful to lift with bent legs and a straight back. Helper in water lifts student out by grabbing student's waist and lifting to pool's edge. On-deck helpers then grip armpits and under knees and lift student back into wheelchair, all the while using proper lifting techniques as mentioned above

Exit pool back to straight chair-

- Chair is placed back into water and the reverse process of the entry is completed

Towel exit-

- towel or blanket is lowered into water to helper who carefully positions towel so that half is supporting student's back
- helper then hands towel ends to on-deck helpers (3) and they proceed to properly lift towel and student out of the water
- in-water helper supports student's legs and thighs
- student is lifted to pool's edge and from there a lift is attempted back to waiting chair

Activity:

Once the students have entered the water the watermanship assessment can begin. The instructor will direct the students to wait until they are told before attempting a skill. The instructor will say: 'When I tell you to I want you to...'

. position head down in water grip pool's edge if necessary and blow bubbles (breath control and to avoid water intake)

. bob head up and down in water grip pool's edge if necessary (to determine breathing rhythm and coordination)

. demonstrate floating or drown proofing for one solid minute while assuming either a prone or supine(face down, face up body position)and then recover face up and relocate to pool's edge (self-maintainance in water and mobility)

*termonology might need to be explained

1. prone position- body position is face down in the water
2. supine position- body position is face up in the water, like sitting
3. drownproofing- body position is usually face down and person will lift head occassionally to breath, remaining motionless in the water to conserve energy and to rest(a form of self-rescue)

* not all students will perform skills at the same time, but half will be in the water while the other half serves as spotters

SKILL: ~~Entries, Exits, Watermanship~~ LESSON 2 2.0 hrs.

EQUIPMENT NEEDED swimsuit, towel, blanket, chair(s)

~~lifesaving equipment poolside,~~

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
6. given instruction and participation, the students will make safe entries and exits either assisted or unassisted by achieving the task analysis	6. given the opportunity to make entries and exits, the student will utilize one or several methods for entry and exit: Entry- a. wheelchair b. straight chair Exit- a. wheelchair b. straight chair c. towl/blanket d. bump up steps	6. Buddies are very important helpers for this activity. They provide additional safety and assistance for the instructor
7. given the opportunities to aid and assist, the buddy helpers will demonstrate responsible care for their peers and/or disabled counterparts by performing the task analysis	7. When they are instructed to assist, the buddy helpers will safety spot for their partner upon entries and exits. They will: a. hold chairs b. lift students c. assist students in locating pool's edge d. maintain positions of safety both in and out of water e. lend support	7.
8. provided the opportunity, the students will demonstrate the minimum required watermanship abilities as determined by the task analysis	8. All students will be asked to demonstrate certain watermanship abilities which include: a. bobbing b. blowing bubbles c. drownproofing d. floating in prone or supine positions/one min. e. recovery to face-up position and relocate to pool's edge	8. all buddies can spot each other while each is demonstrating the skills

Comments, Techniques, Activities

Comments:

While students demonstrate watermanship abilities the instructor is making assessments of the need for floatation devices to aid the disabled student's balance and buoyancy. The following are some conditions appropriate for floatation devices:

1. improve head position
2. improve prone position
3. aid in positioning for range of motion of upper and lower extremities
4. improve extension of hip, shoulders, trunk, and knees
5. improve overall body position for skill practice opportunities

Listed below are some floatation devices that are valuable aids to the instructor when teaching skin diving skills to the disabled.

- water wings
- rubber or plastic tubes
- plastic bottles
- personal floatation device (PFD)

*PFD will not be introduced or used in this introduction to skin and pre-scuba diving unit. The PFD is extensively discussed and used in basic scuba courses. Its use will be considered on an individual basis, however.

*(see appendix C1-11 for additional information on commercially available floatation devices and aquatic aids)

Sometimes, the disabled student will already have used a type of floatation device when they first learned how to swim or relearned how to swim after a disabling accident. The instructor should take the advantage of asking the student about this information and use the students suggestions as a starting point. The instructor can also recommend other types of devices to be tried and work with student in using the device(s).

Techniques:

The technique for applying and using floatation devices or for improvising floatation devices is not monotypic. Therefore, the instructor and student have ample latitude to explore any number of devices and methods. If possible, the instructor should work individually with those handicapped students assisting them in becoming secure with a floatation device. Once the student's balance and buoyancy have been compensated for, the course can proceed on a routine pace.

Activity:

Individually, if possible, the instructor will assist the handicapped student to become secure with a floatation device that will eventually enhance their balance and buoyancy and thus, aid in their propulsion in skin diving skills.

NOTE: *** earplugs should never be worn when one undertakes the sport of skindiving. They can become lodged deep within the ear as a result of the increased pressure, thus inflicting serious injury to the user. Instructors should caution their students about this fact.

SKILL: Use of floatation device(s) LESSON 2-a

EQUIPMENT NEEDED variety of floatation devices, either commercially constructed or personally improvised

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
9. given instruction and participation student will become secure with a floatation device that will aid in improved balance and buoyancy by accomplishing the task analysis	9. students will try out a variety of floatation devices and select one that they feel secure in using 9-a. students will use the device and maintain balance and buoyancy at the surface	9. the instructor will work individually with those handicapped students needing this additional training 9-a. (optional) able-bodied students may participate as aids in this session in order to learn more about the abilities of their partners

Comments, Techniques, Activities

Comments:

The students have become familiar with three essential pieces of skin diving equipment: the mask, the snorkel, and the fins. They have learned about some of the features, functions, and how to select and care for the equipment. Learning how to use all three items as a unit for skin diving takes skill and practice but once these skills are accomplished, other activities in water recreation can be pursued.

Instructors should teach the mechanics of each piece of equipment separately and then combine the uses together for more practice. Below are some considerations to be aware of when teaching the use of each piece of equipment.

The Mask- use a defogging agent on inside of mask plate before use and inbetween uses if surface interval time is lengthy. There are commercially available defogging kits but saliva and regular shampoo are two methods that are also effective.

some students might feel uncomfortable at first with the mask on their face. It creates a closed-in feeling for some people. Also, students will have to resort to mouth breathing when they begin using the mask and snorkel so the instructor should watch for signs of anxiety (wide eyes, constant taking off of mask).

adjustment of mask and all equipment should be done on deck before getting into the water

Snorkel- the bore size of a snorkel should be at least 3/4 inch for an adequate air supply and the interior surface should be smooth to reduce airflow resistance

the neck should be long enough to reach the surface with the student in the prone position. Too long creates a pressure problem and makes breathing very difficult

the mouth piece should fit the student comfortably. If the student complains of a sore jaw perhaps the mouth piece is is too large or small and the student must grip it with their teeth. Encourage the students to relax when holding the

Comments contd.:

Snorkel- snorkel in their mouth.

The Fins- to avoid chafing and rubbing of the fins, encourage the students to wear socks, or some form of foot protection. If the student wears the open heal fin, then dive booties are recommended. The student may also wear tennis shoes or heavy socks. If the student wears a full foot fin perhaps only socks are necessary for added protection from chafing.

if a student's legs should become fatigued while kicking it could be because the fins are too big or they are improperly kicking and instructors should be aware of this

for the paraplegic student wearing fins, be sure that their fins are not weighting their legs down when they are in the prone position, if so compensate with floatation devices.

Techniques:

Before the students enter the water all the equipment must be adjusted on deck. Explain the buddy system at this time. Below are some components of the buddy system which the students should practice routinely.

- maintain close proximity with partner as to lend support
- inspect each other's gear for sign of wear and proper placement
- provide stability for person putting fins on
- assist with in-water skills such as spotting, and demonstrating

Adjustment of Mask strap

1. the strap should not be too tight so that mask fits snug but tight enough so that mask does not fall off face. The ends of the strap should be woven through side clamps so that they face the inside next to the persons temples. This helps to streamline.
2. to place mask on face position it without using the strap and inhale gently while taking the back of the strap and extending it over the head. The strap should rest over the ball of student's

Techniques contd.:

head. If the strap has a split design, then the split opening should be over the ball of the student's head. If the strap is too low at the base of the head, the mask is likely to leak. Students should make sure that no hair is under the mask skirt around the face to avoid leaking. Buddy check

3. have students practice inhaling and exhaling gently to experience how the mask feels when the pressure increases and decreases

4. Explain equalizing- as the student goes underwater with the mask on, he/she will experience the mask becoming tighter against their face due to an increase in pressure (water and atmospheric). When this happens the student can even out the pressure (or equalize) by gently blowing air into mask from the nose. Usually, one will be more aware of this happening as one dives to depths greater than five feet. This tightening is also referred to as a 'squeeze'.

5. ear equalizing- the same kind of effect happens to air spaces within the ear as a person dives down and in order to avoid pain in the inner ear or possible rupture of an ear drum students must be taught to equalize this pressure as well. First, have the students pinch off their nose with their fingers, close their mouth and gently force air from lungs, through eustachian tube as if exhaling. They will be able to feel their ears "pop" (much the same as when chewing gum or yawning or wiggling the jaw). The students must be aware that equalizing takes place as soon as they descend on any skin dive.

when the mask is on, the students will pinch the nose at the nose pocket and equalize (wiggling the jaw also works for some people).

6. practice in a stationary position on deck and then in the shallow water of the pool. Instructor must be sure to have students in shallow end of pool with their back facing the pool wall while the instructor faces the class with his/her back to the deep water This position is referred to as the ready or face front position.

Activities:

The students will learn how to properly place a mask on their face and give buddy checks to their partner. They will make any necessary adjustments to the mask and test it for fit, comfort and leaks. Students will also learn how to equalize their mask and ears (the air spaces within these).

SKILL: Mask adjustment and placement, equalizing LESSON 3 6.0 hrs.

EQUIPMENT NEEDED mask, any kind of mask defogger

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
). given instruction id participation, ie students will ractice sound buddy echniques by per- orming the task ialysis	10. students will conduct a buddy check with their partner each time equipment is used and a skill is to be performed by: . maintaining close proximity with partner . inspecting each other's gear for signs of wear and proper fit and placement . stand next to their buddy when fins are being put on as to help stabilize . provide in-water support	10. (same)
1. given instruc- ions and partici- ation, students ill prepare and djust mask for se by performing he task analysis	11. the students will keep the mask from fogging by: . applying a comm- ercial defogging solution or by using saliva and rubbing the inside mask face plate	11.
2. given instruc- ion and partici- ation the students ill be able to djust mask and roperly place on ace by performing he task analysis	12. students will secure mask strap by: . making sure that strap ends are woven so that they are next to their temples . place mask up to face, inhale, move mask strap over head and rest it on ball of head	

SKILL: mask adjustment and placement, equalizing LESSON 3

EQUIPMENT NEEDED mask, any kind of mask defogger

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
	12. . spread split strap so that open part is over ball of head	12. buddies make sure that mask is on face properly and that no hair is under the mask skirt 12. a. buddies should also check strap position on each other
. given instruct-n and partici-tion, students will rform equalization accomplishing the sk analysis	13. students will equalize the air spaces in the mask and in their ears by doing the following: Mask- . gently blowing air from nose into mask to release the pressure * students may practice this tech-nique by inhaling and then exhaling through nose to release pressure ears- . pinch off nose with fingers . close mouth . gently transfer air from lungs through eustachian as if exhaling . feel ears "pop" * equalizing can also be done by merely wiggling jaw	
. given instruct-n and partici-tion students will able to test for oper placement d accurate adjust-nt by performing e task analysis	14. students will demonstrate that they adjusted and placed their masks correctly by doing the following: . in shallow water students will take take a deep breath and bob up and down until they come to rest on the bottom of pool all the while testing for leaks and equalizing	14. one buddy per-forms while the other spotts. Buddy may be asked to help hold hands of a disabled student while task is performed

Techniques:

Before combining the mask and the snorkel have students practice breathing from the snorkel on deck to establish a rhythm of slow, deep breaths. After two to three minutes of this kind of breathing practice have the students practice some stationary breathing with the snorkel from within the pool. Only, this time, the students should flood the snorkel so that water remains in the curved portion and mouthpiece. Using the tongue as a guard by placing the tip of the tongue on the roof of the mouth, have the students carefully breath "around" the water that is in the snorkel. This technique is often used after a surface dive when some residual water might be left in the snorkel after it has been cleared.

The Clear

There are two basic methods for clearing a snorkel of water after a surface dive (without taking the snorkel out of mouth). Students will learn the Blast and the Displacement methods. The blast method can be practiced in a stationary position from the shallow end of the pool. In theory, the student actually "shoots" the water out of the snorkel with the same force as shooting a pea shooter. For some students this method will be easy and usually one blast will clear the snorkel. The student who has been confined to a wheelchair for any length of time may be hampered by poor abdominal muscles and thus find this method a bit difficult. It may require that these disabled students will have to blast more than once. The displacement method will be discussed when the mask and snorkel are combined.

Activities:

Students will practice breathing techniques with the snorkel. Emphasis will be on developing a slow, deep rhythm. The students will then practice one of the two clearing techniques of the snorkel, the blast method. In addition to these skills, the student will practice breathing "around" the water within the snorkel mouthpiece. Finally, the students will demonstrate the newly acquired skill by competing against each other in a game called 'blast off'.

Game, 'Blast Off'

This game is to allow students to demonstrate the skill of blast clearing while the instructor evaluates their abilities.

- pair students in groups of two
- if there is an odd number then someone may substitute
- the pairs will be asked to clear the snorkel three times using the blast method.
- the instructor will indicate the winner of each three blast round
- there will be elimination of winners and losers until
- the winner of each group (winners, losers) blast off against each other
- the instructor will declare a winner
- an incentive award is given (to be decided by instructor) (a snorkel keeper usually makes a reasonable prize)

* note: if one or more people have difficulty with blasting due to a physical limitation, they might be given extended chances to compete

SKILL: snorkel use, clearing and blasting LESSON 3

EQUIPMENT NEEDED snorkel

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
15. given instruction and participation students will be able to successfully use a snorkel by performing the task analysis	15. students will follow the sequence of steps for learning how to breath from a snorkel. . with snorkel in mouth take slow deep breaths for two to three min. to develop a rhythm . carefully breath around water in snorkel and use tongue as a guard to keep from swallowing water . make sure to inhale before doing this skill- remove mouthpiece and flood snorkel. Proceed to clear snorkel by using the blast method. Practice doing this until snorkel is cleared each time the attempt is made This skill is best performed when head is resting on the surface of water	15. Buddies can watch each other as they take turns and report to each other how much water is 'blasted' out each time
	* students will be evaluated by the instructor when they play 'blast off' . students will blast off in pairs as instructor evaluates and until a winner is declared	special instructions will be given at this time if necessary to any student having difficulty blasting

Techniques:

There are a few general rules of thumb to remember when using swim fins. Most of these apply to everyone including the disabled student. Some form of foot protection should also be worn.

1. put fins on near pool's edge as to minimize movement with fin on

2. insert foot into foot pocket first then pull heel strap up over heel or pull the heel pocket up over heel. Do not pull fin up on foot by heel strap or back of heel on full foot fin because this will cause stress and strain and eventually weakening of the strap or heel pocket

3. if one must move in fin, movement should be either sideways or backwards, never forward because one may trip over blade. This technique is true for in-water movement also.

4. The disabled person should put fins on while sitting on pool's edge and acquire buddy's help to stabilize. If the disabled person makes an entry from the wheelchair, the fins should be put on after person is in water at pool's edge and assistance should be given. Also, when one uses a pool tier for entry, then fins should be put on in water at pool's edge.

Kicking with Fins

The instructor can assume that the students have had experience kicking in the water or ambulating in the water. Kicking with fins requires more strength and exertion and for able-bodied swimmers there is a tendency to "bicycle" kick. The instructor must watch for this error and emphasize a straight to slightly bent leg when kicking.

The disabled swimmer (paraplegic) does not use fins and leg movement for propulsion but rather for stability. Instead of a flutter kick, slow and deliberate as the able-bodied student would use, the disabled student uses a whole body movement to propel. This whole body movement can be described as the dolphin. Arm movement is encouraged for the disabled swimmer whereas it is not recommended for the able-bodied swimmer when skin diving. The arms are also used for steering by alternating extention.

Kicking with Fins cont.

The dolphin movement can be enhanced by the use of arm alternating extention. As the head and shoulders move downward and upward, the arms alternate front and back with an underwater recovery. If this method is too difficult, then the arms may remain down close to the sides and can be moved in quick up and down movements much like the movement of pectoral fins on a fish. Most of the forward movement will come from the wave action movement of the head and shoulders. Additionally, another way for the paraplegic to propel is to use a breast stroke arm movement and include the use of webbed hand gloves or hand paddles. (hand objects present a problem when gear needs to be adjusted) If balance and buoyancy is a problem for the disabled student, then floatation devices should be used. They can be attached to the lower body to aid in the stability and buoyancy.

Activities:

The students will practice putting on, entering, removing fins and practice proper movement in and out of water. Students will practice swimming with fins so instructor can evaluate technique.Certain lead-up skills will be practiced as necessary along pool's edge to help improve technique. Conditioning practice will be conducted as necessary. Students will be divided into groups (ones, twos, threes etc) and asked to swim pool widths at staggered starts as a form of conditioning and so the instructor can evaluate performance.

SKILL: Use of Fins, put on, take off, swimming with LESSON 3

EQUIPMENT NEEDED Fins, foot protection such as booties, floatation devices as necessary

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
6. given instruc-ion and partici-ation, students ill correctly on (put on) their wim fins, move n them correctly, s determined by ompletion of task nalysis	16. students will properly don their swim fins by accomplishing the following in sequential order: . locate near pool as to minimize on-deck movement . while sitting students will put each foot into foot pocket one at a time . to secure strap students will take strap and bring it up over heel without stretching the strap too much . complete same procedure for full foot fin only pull up fin heel over heel as if putting on a shoe *if foot becomes tingly and sore the strap may be too tight and may need to be loosened . seated students may now ease into pool off pool's edge by lifting and lowering themselves into water . students will remember to move backwards in water with fins on	16. buddies remain together near pool and are ready to support each other when fins are to be put on able-bodied student will don fins first and enter water as to be ready for thei wheelchair partner when he/she enters pool from wheelchair an additional buddy may be requested to hold chair as the disabled student enters. buddies will practic rules and guidelines for helping any dis-abled student into water and don their own fins afterwards

SKILL: Use of fins, put on, take off, swim with LESSON 3

EQUIPMENT NEEDED same

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
6. contd.	16. . student standing on deck near pool's edge will hold on to shoulder of their buddy, cross one leg and put fin on foot in same manner as when sitting. To put second fin on, student will stand do-se-do position with buddy, cross other leg and put second fin on. Student will face pool with fins on. . student will remember to move either sideways or backwards while on deck if needing to relocate.	
7. given instruction and participation students will enter water with fins on by performing the task analysis as stated in #16.	. student will squat to a sitting position, swing legs over pool's edge and ease into pool by lifting and lowering themself into water . student will remember to move backwards in water with fins on while maintaining contact with pool's edge * stand up entries will not be delt with in this entry level class (such as giant stride entries).	

Comments, Techniques, Activities

Comments:

Swimming with fins is first practiced without the use of other equipment so the students will be able to concentrate on one skill. The instructor, however, will be directing two contrasting lessons because the skills for the able-bodied and physically challenged are very different. The able-bodied student will practice kicking only, without the use of arm movements. Emphasis will be on developing a strong kick and the instructor must watch for and correct any "bicycling" errors. The disabled student will practice stability control in getting use to having fins on their feet as well as any floatation devices. Emphasis will be on incorporating arm movements for propulsion and/or using the dolphin movement for propulsion.

Conditioning exercises will be used so that students can practice the techniques, increase their cardiovascular and endurance performance and so that the instructor will be able to give added attention where needed.

Techniques:

Students will be swimming either the width or length of the pool depending on availability. Able-bodied students will swim a 'snake' pattern, one person after the next for a designated number of laps. Kick boards may be used for this routine. While these students are conditioning, the instructor may work with the disabled students on arm stroke coordination, dolphin movement and floatation device adjustment. These students may then join the snake conditioning routine.

When the students finish a series of laps the instructor will

Techniques contd.:

evaluate their performances. The instructor may need to opt for more conditioning practice or work individually with special cases. Instruction must be given for recovering from a prone position after swimming with fins to a verticle standing position. The students may try to stand forward thus losing balance. As the students near pool's edge and are ready to stand or face front in the verticle position, have them roll over on back, assume a somewhat sitting position so that their fins are underneath them and then stand. The procedure is the same for the handicapped students except they must grip pool's edge after they make the turn to the sitting position.

Activities:

The instructor may wish to demonstrate the proper kick technique for the class while the students are on deck. Both methods of propulsion can be demonstrated (for the abled and for the disabled). If the instructor has an assistant, the assistant can demonstrate while the instructor comments. The students will then perform the following activities. Kick boards may be used if available.

The 'Snake' - in a single line each student begins to swim the lines of the pool (if they are swimming lengths) or in a line from side to side of pool (for approximately 8 laps). Consecutive students begin to swim as the previous student is 10 seconds ahead (in order to insure spacing).

students get to rest for a few minutes after completion of the first circuit.

instructor comments are given at this time and any more needed demonstrations as well as student demonstrations.

repeat the snake procedure and instructor

Activities contd:

	makes evaluations, corrections, and suggestions depending on the students' needs.
Optional Game	for additional practice kicking with fins or dolphin propelling the instructor may have students compete with each other to see how far they can glide with a limited number of kicks or dolphin moves. The instructor sets the the limit and to modify for the disabled there may be extra number of movements allowed for them.

SKILL: ~~swim with fins, conditioning,~~ circuits LESSON 3

EQUIPMENT NEEDED fins, and kick boards, floatation devices as necessary

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
18. given instruction and participation, students will demonstrate the proper propulsion with fins by performing the task analysis	18. able-bodied student will accomplish the following when given the opportunity: . use kick board . swim in snake formation for approximately 8 laps and use slow deliberate kicking motions . rest as necessary . begin circuit again student with physical limitations will accomplish the following when given the opportunity: . use floatation devices as necessary to aid in stability and and buoyancy . swim in snake formation for designated number of laps (to be modified as instructor sees as necessary) . use appropriate propulsion method (dolphin or breast stroke) . rest as necessary . continue additional circuit	18. buddies may be used to demonstrate a technique or to work with othe students who need extra practice
19. given instruction and participation, students will be able to properly recover to a verticle		

SKILL: swim with fins, conditioning, circuits LESSON 3

EQUIPMENT NEEDED same

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
19. contd. position after swimming with fins by achieving the task analysis	19. given the opportunity the students will: . approach pool's edge . roll from front to back . assume a somewhat sitting position with fins underneath them . prepare to stand . stand/ or grip the pool's edge and face front (or direction of instructor) . use this method to stand verticle whenever recovering from a prone position while swimming with fins	19. students may want to practice their kicking or propelling by participating in an optional game
20. given instruction and participation, students will improve their cardiovascular and endurance potential by performing the task analysis in #18 and #20.	20. given the opportunity the students will continue extra circuit practice or participate in the optional kicking game.	

Comments, Techniques, Activities

Comments:

After students have had the opportunity to become familiar and practice with each piece of skin diving equipment, they are ready for an initial trial using all the skin diving equipment in combination. By now the students should assume some responsibilities as stated below, and the instructor should oversee the process and assist when necessary.

- adjustment of equipment
- buddy checks
- movement with equipment
- entries and exits, with and without assists
- care of equipment

An important part of student success in trying new skills is how effective the instructor is in motivating them and instilling self-confidence. One way to do this is to help the students to think positively. This is done by encouraging students to reconstruct strategies and skills in their mind, visualize how the skill is to be performed and then talk out loud as if to describe the step by step process. When the students mentally perform the skills first, before actually doing the skill, they will be more confident. The instructor should also help the students to realize that failure is a realistic possibility; it should not, however, be feared. Dwelling on the fear inhibits effort. Students should experience enjoyment from self-improvement and the instructor should structure the atmosphere so that students do learn from their mistakes.

Techniques:

A brief demonstration by the instructor or an assistant is appropriate at this time. The demonstrator will swim a few laps of the pool. Students will observe the use of mask, snorkel and fins and method of propulsion. When given the opportunity, the students will be allowed free practice. The instructor will make assessments at this time and give help in special cases as necessary.

Activities:

Students will don their equipment and begin free practice. Students who need more help will be assisted at this time. The students will also be given a second quiz over methods, termonology, equipment and buddy techniques.

SKILL: Free practice with mask, snorkel, fins LESSON 3

EQUIPMENT NEEDED mask, snorkel, fins, floatation devices as necessary, Quiz #2

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
21. given instruction and participation students will be able to correctly use the mask, snorkel and fins while swimming as determined by the task analysis	21. given the opportunity, students will: . practice free swimming while using the mask, snorkel and fins in combination . swim several laps of the pool as necessary in order to practice kicking, clearing, and become comfortable with all the gear . disabled students will experiment with different methods for propulsion to determine which way is best (dolphin, or breast stroke with underwater recovery) able-bodied students will practice their flutter kick and concentrate on slow kicks	21. students who are particularly good at a skill might be asked to demonstrate or to work with another student in the class who is having difficulty.
22. given the opportunity, the students will be able explain some of the important aspects of skin diving equipment and how it is used as well as explain some of the termonology by performing the task analysis	22. given the opportunity, the students will answer questions on quiz #2 . with at least 80% accuracy	

Equipment Use
Quiz #2

DIRECTIONS: Read the following scenario and select a word from the list that is being described.

defogging	blast	don
buddy system	bicycle	floats
equalize	dolphin	bore

1. These are often used to help compensate for the lack of buoyancy and balance. _____

2. One can use a commercial product or saliva in order to maintain a clear mask while skin diving. Rubbing the inside of the mask with either product is referred to as _____.

3. This part of a snorkel should be at least 3/4" wide so that efficient breathing can take place. _____

4. In order to correct a pressure imbalance within air spaces either in the mask or ears, or sinuses (or all) one must _____.

5. The practice of maintaining close proximity with a diving partner, inspecting each other's gear, providing support and assistance is referred to as (the, a) _____.

6. The practice of putting on all the gear for diving is described as to _____ the equipment.

SHORT ANSWER:

1. Describe how one would equalize a mask. _____

_____

2. After a surface dive, the first breath off the snorkel should be a careful one, explain how this is meant to include the technique.

3. How should one move with fins? _____

4. Explain propulsion with mask, snorkel and fins as it applies to you individually and be sure to indicate which tecnique you use.

_____

_____

Comments, Techniques, Activities

Comments:

One of the most important skills for a student to learn in skin diving is surface diving. There are several ways for a skin diver to descend. The methods most often used are the feet first, and the head first surface dives. For the purposes of this unit, only the head first surface dive will be discussed because it is the surface dive most often used by a skin diver in making a descent. Both abled and disabled students can successfully perform this method. There is some modification for the physically challenged individual's approach.

The second form of snorkel clear will also be presented with this skill. This method is called the displacement clear. It is an effective way to clear the snorkel and it requires very little abdominal thrust.

* The instructor might want to mention that some snorkels on the market have a purge valve at the lower end of the snorkel mouthpiece which allows for almost automatic clearing of the snorkel as the diver ascends and breaks surface. Some students may even have this type of snorkel in which case, the need to stress the displacement method is not a priority. However, the skill is a useful one to know.

Techniques:

The instructor or an assistant should demonstrate the surface dives several times for the class as the students observe from on

Techniques contd.:

deck and also from within the pool. The one demonstrating should also show the surface dive with the modifications for the handicapped students. The surface dive is done in deeper water. The approach begins in the shallow end of the pool and as the swimmer gets into deeper water, then the dive can be made. Below are the steps in sequence for attempting a head first surface dive. Modifications for the disabled students are in sequence following the step as it is presented for the able-bodied. If floatation vest is required for any student needing added surface support see explanation next page.

. remember to equalize on all dives as soon as one leaves the surface toward the bottom

.assume the prone position, head down, face in water, arms down by side/ arms extended for swimming if disabled

. from shallow end toward deeper end begin flutter kicking/ or dolphin swim or breast stroke pulls

. upon reaching the sloping area of the pool where water deepens, remember to inhale a full breath of air

. remember to equalize while descending

. at this time, deflate personal floatation device (PFD)

. bend at the waist as if to touch toes, head down

. thrust feet high into air directly above and in line with the rest of the body/of disabled, use arms to pull body downward by doing the underwater breast stroke in combination with the dolphin swim

. remember to be equalizing and if wearing a PFD, remember to hold deflator hose higher than air source and depress the button so residual air escapes (one may also need to squeeze vest if air becomes trapped)

. gravity helps in the descent process, but as the body begins to descend, student should propel him/her self more by kicking or /dolphin swimming or breast stroke pulling

. student should try to descend down to drain and touch it if possible

Techniques contd.:

. remember to be equalizing as necessary

. for the ascent, students arch back slightly if possible and look directly up at the surface

. one arm should be extended overhead to prepare to clear any overhead obstruction

. student propells to the surface the same way he/she propelled usually

. head is tilted back while student looks up toward surface and begins to move upward, rotating 360° to view surface

. student exhales slowly all the way to the surface, gradually forcing the water in snorkel out (displacement)

. as head breaks the surface, students level out to the head down and prone position, continue to kick/propel

. breath carefully around any residual water in snorkel

. blast any water in snorkel if necessary,/inflate PFD

. swim to pool's edge

Personal Floatation Device (PFD)

. has enough volumn to support person, buoyantly

. has an accessible manual inflation hose (for deflation too)

. has an over fill purge valve

. depress button on inflator hose and blow air into vest but release button inbetween breaths

. inflate vest so it is comfortable and not too restricting

. to deflate, depress same button on hose and hold hose higher than air in vest (air source), squeeze vest if necessary to get all air out of vest before descending

. release button as one begins to descend

. * to reinflate on surface after dive, one should roll over on one's back and accomplish these procedures but kick or/ dolphin swim or side stroke while blowing air into vest

Activities:

Students will practice surface dives with displacement clears. Some students will practice using the PFD as necessary. The practice will be self-paced and students will work in buddy pairs. The instructor may want to work individually with students needing more help. Those students who are better at the skills may practice making surface dives in combination with swimming laps of the pool for conditioning all the while practicing surface diving. Students may want to dive for pennies or poker chips.

SKILL: Surface diving and displacement clearing LESSON 4 2.0 hrs.

EQUIPMENT NEEDED mask, fins, snorkel, Personal Floatation Device objects to dive for,

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
23. given instrc-tion and par-ticipation, the students will demonstrate a head first sur-face dive with a displacement clear of the snorkel by per-forming the task analysis	23. given the opportunity the students will: . remember to equalize at all times as necessary while they are descending . assume prone position, with mask, snorkel, and fins in place and arms in the ready position for swimming (down by side, others, and out in front for stroking, dis-abled student) . swim toward the deeper end of pool from shallow end . remember to in-hale before ascend-ing and remember equalizing .deflate PFD if applicable .bend at waist thrust feet dir-ectly above body and propel down-ward/ or if dis-abled, after the bend, use arms to help pull one-self downward by breast stroke and dolphin swim, the body will look arch-shape instead of straight up as the other students	23. Buddies will stay together and swim side by side, and each will view the other as to critique or to give encouragement

SKILL: surface diving, displacement clearing LESSON 4

EQUIPMENT NEEDED same

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
23. contd.	23. contd. . equalizing . if applicable, hold deflator hose higher than air source so air will vent from PFD . propel toward drain and touch it if possible . ascend by looking up toward surface with head tilted back . one arm extended for protection from overhead obstructions (safety measure) . slowly ascend and rotate 360° to insure surface is clear . head tilted back while exhaling slowly, displacing the water in the snorkel . level out as body breaks the surface and carefully breath around any water in snorkel . blast if necessary . repeat process	23. some students might be asked to demonstrate the technique and these students might also work with others needing help.
24. given the opportunity, students will improve the technique of surface diving and displacement clearing by performing the task analysis (23) several times		

Comments, Techniques, Activities

Comments:

Extended swimming with fins may cause muscle fatigue and cramping. The students should be given instruction in self-rescue and in buddy assists. This instruction should include cramp release.

Techniques:

self-rescue:

. stop activity, think about what is happening and get into control by rolling on back to inflate PFD if wearing one or to simply change kicks. One may need to change from back to front to change a kick, but sometimes just by changing kicks, the cramps will go away.

. to release a cramp, assume a 'sitting' position and reach over to grab the top of the fin. Pull fin tip toward body and hold the position until cramp releases.

. buddy may assist by holding the victim up and steady while in the water. Buddy can also talk calmly to partner and encourage.

. rest before resuming activity, take slow, deep breaths

. if one is cold and tired, the activity should not continue and the student should get out of the water.

buddy assist:

. until one is trained in rescue techniques a verbal buddy assist is appropriate for use for this lesson.

. tell victim to relax, breath slowly and deeply and have the person roll over on back to change kicks or to inflate a PFD if he/she is wearing one. Indicate to the person to try and change kicks.

. call out the verbal instructions for a cramp release and assist if necessary. Rub the affected area if possible.

. sometimes, calming words may help another gain composure.

Activities:

The students will observe a demonstration of the following skills and then they will practice:

- cramp release and/or
- verbal buddy assist and
- self-rescue, cramps or fatigue

SKILL: self-rescue, cramp release, self, buddy and verbal buddy assists LESSON 4

EQUIPMENT NEEDED same

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
25. given instruction and participation, the students will be able to perform a self-rescue as determined by the task analysis and teacher observation	25. given the opportunity the students will: .stop, think and get into control . roll to a different position and kick a different way, use PFD if... . assume a sitting position in water and reach for top of fin. Pull fin top toward body and hold the position until cramp releases . stop activity if tired or cold and only resume activity if none of the mentioned problems persist	25. buddies will help by holding each other up in water as each one practices the cramp release
26. given instruction and participation, the students will be able to demonstrate a verbal buddy assist by performing the task analysis	26. given the opportunity the students will: . tell victim to relax, breath slowly and deeply . tell victim to roll over to change kicks or to inflate PFD if person is wearing one, . call out verbal instructions for for cramp release . assist by holding person up while he/she releases cramp	26. The handicapped student will participate by giving verbal buddy assists and by doing a self-rescue for fatigue

Comments, Techniques, Activities

Comments:

The concept of enjoyable education has been around a long time. Learning takes place more effeciently and more effectively in a pleasurable atmosphere. What promotes a pleasurable atmosphere most often is a playful attitude. Like having a good sense of humor, having a playful attitude helps not only the instructor but the students as well cope with frustrating situations. If the student is happy while performing a skill, there is a greater chance the student will feel less pressured to performing the skill to perfection. If the student does not feel that each skill must be done perfectly, then he/she will be more apt to try the skill again if more practice is necessary.

Repetition of skills is often necessary in order to reach mastery of the skills. Play activities and circuit practice are ways to provide the repetition in an enjoyable way. Sometimes the games may need to be modified to accomodate the handicapped students. Below are some ways suggested by the American Red Cross for modifying competitive games.

- change or reduce size of playing area
- use larger equipment or adapted or substituted equipment
- slow the tempo, speed or increase both
- add players to slow down game activities, or decrease players to speed the game
- reduce the time factor to guard against fatigue
- make minor rule changes but keep game concept the same
- reduce points to be earned
- make fee substitutions of other skills and give assistance

The game area of a pool should be prepared ahead of time in order to insure that things run smoothly. Equipment should be selected to fit the skills being taught. An example might be using straws, tubes

Comments contd.:

reeds, and hoses for demonstrating the use of the snorkel. Also, make sure there is enough equipment so that all students can be using it or so that there is enough within a circuit station that all participants at the station have some to use. The equipment does not have to be commercially constructed. Some of the better "water toys" are those home-made. Below is a list of items often used for skill practice or for games.

jugs, spoons, bottles (plastic), sponges, tubes, cups, pots, pans, clothespins, straws, chips, pennies, sinkable rings

Through play activities, students can develop skills at their own pace and level. They will be getting the repetition they need in order to master the skill. They also experience new skills through discovery.

Techniques:

The students will participate in circuit practice as well as a game in order to improve their skin diving skills. The instructor may be flexible on time requirements for this lesson based on individual student needs. This type of activity can be repeated on successive days and different games and circuits can be used.

Game: Clothes Pin Mania

The class is divided into two teams. One member at a time from each team will swim the length of the pool from shallow to deep end. They must blast clear their snorkels at least once on the way to deep end. Submerged in the deep water is a "clothes line" with 75-100 clothes pins attached to it (sink two weights with a line tied to them, one at each side of pool, deep end, ahead of time). Students must make a surface dive down to the clothes line and grab as many clothespins as they can

Techniques contd.:

on the one surface dive. They come up and clear snorkel by displacement method. They swim back to shallow end of pool and the next two people begin routine. Dropped clothes pins cannot be picked up after surfacing from deep end. If a student forgets to blast, or displacement clear or removes snorkel from his/her mouth during procedure, a one-clothespin penalty is assessed for that person. After all students have done the activity, the team with the most clothespins is the winner.

Any handicapped student participating would be allowed to shorten the swimming distance if necessary. Even though teams are competing, the idea is to progress slowly and concentrate on skill rather than speed.

Circuit Practice

On an alternate day, the instructor might wish to organize stations around different locations of the pool. Five stations is a reasonable number where students would have approximately five minutes at each station to complete the task. The time may vary and so may the number of stations as the instructor wishes. The number of students participating will be a factor to consider also. Below is a list of five stations and comments.

Station 1. diving for pennies or swimming a 'snake' of eight lines with a surface dive in deep end only

Station 2. PVC pipe assembly. Large and small pieces of pvc pipe and joints are on bottom of pool in deeper water. Students must make surface dives to the pipe and try to asseble the pipes into a pre-determined design (usually some kind of polygon)

Station 3. Sunken Treasure- Students must raise a PFD and 15-20 pounds of weights attached to it by surface

Techniques contd.:

diving to it and blowing air into inflator hose. Students must clear snorkel on surface.

Station 4. Obstacle course- Sink a hula hoop so that is floating underwater approximately two feet from bottom, sink a lounging chair up side down and arch it so as to make a bridge. Students swim toward deep end, surface dive to the hoop and swim through it, come up, clear snorkel, surface dive again and swim under bridge and come up and clear. Swim back to pool's edge

Station 5. swim widths of pool, on back, balancing a tennis ball on stomach or chest. Students also have the option of pushing a 12-16 pound shot along the bottom from side to side of pool.

The instructor will observe students as they participate at these stations. Time will be noted and students will rotate from station to station or as programmed by the instructor. Certain students will be designated as station monitor in order to provide safety and assistance.

Activities:

The students will participate in games and circuit practice in order to develop skills such as: surface diving, kicking or propelling with fins on, clearing snorkel, and conditioning.

SKILL: Games, Circuits, Conditioning/all skills LESSON 5 2.0 hrs.

EQUIPMENT NEEDED clothesline, clothespins, weights, shot put, lounging chair, tennis balls, pvc pipe and joints, pennies, PFD, and a hula hoop in addition to the regular skin diving equipment and pool safety equipment

ENABLING OBJECTIVE	TASK ANALYSIS	PEER/BUDDY
27. given instruction and participation, the students will improve their skin diving skills and cardio pulmonary performance by performing the task analysis	27. Given the opportunity, the students will : . swim with all their skin diving gear in place . make surface dives . clear their snorkel using the blast and displacement methods . practice their breath holding capabilities . participate in in Clothespin Mania game . participate in 25 minutes of skin diving circuit practice	27. buddies will be designated as station monitors by the instructor to help insure safety and assistance individuals will take turns being station monitor

Comments, Techniques, Activities

Comments:

The students have been taught the basic skin and pre-scuba diving skills throughout the lessons presented in this unit. Mastery of the skills occurs when one can perform them in a comfortable, confident, and safe manner. Through practice and repetition the skills can be mastered. The instructor must use professional judgement to qualify a student as having mastered the skills; so much of the determination is based on observation of watermanship. Further mastery can be obtained with additional training in the sport. Students who are inspired by the sport of skin diving might be encouraged to know that other opportunities exist for skin diving participation. Through dive shops, The American Red Cross, The YMCA and YWCA, The Handicapped Scuba Association and diving organizations such as: The National Association of Underwater Instructors, The Professional Association of Diving Instructors, The Los Angeles County of Parks and Recreation and others, students can learn about classes being offered in scuba diving. Sports magazines, newspapers, and local advertising provide other good sources of information about skin and scuba class offerings. For additional information, books, audiovisuals, products and names of organizations, see Appendix F 1-2.

ATHLETE PROFILE SHEET

Name_____ Birthdate_____

Address_____ Age_____

_____

Phone_____

Diagnosis_____

Etilogy_____

Equipment Used (orthotice, walking aids, etc.)_____

_____

ADL (Activities of daily living) Independence? Yes____ No____

_____

_____

_____

Medications_____

Special Considerations_____

_____

Previous Involvement in Sports_____

_____

Sports Interests_____

ATHLETE SURVEY SHEET

The following information might be helpful to obtain regarding the disabled participant in addition to the information obtained from the Athlete Profile Sheet.

1. Present Health Status
   - Medications
   - Allergies
   - History of lung disorder or heart disorder
   - Physical fitness status
   - Other (to include medical history form or physical exam)

2. Present sport/recreation involvement

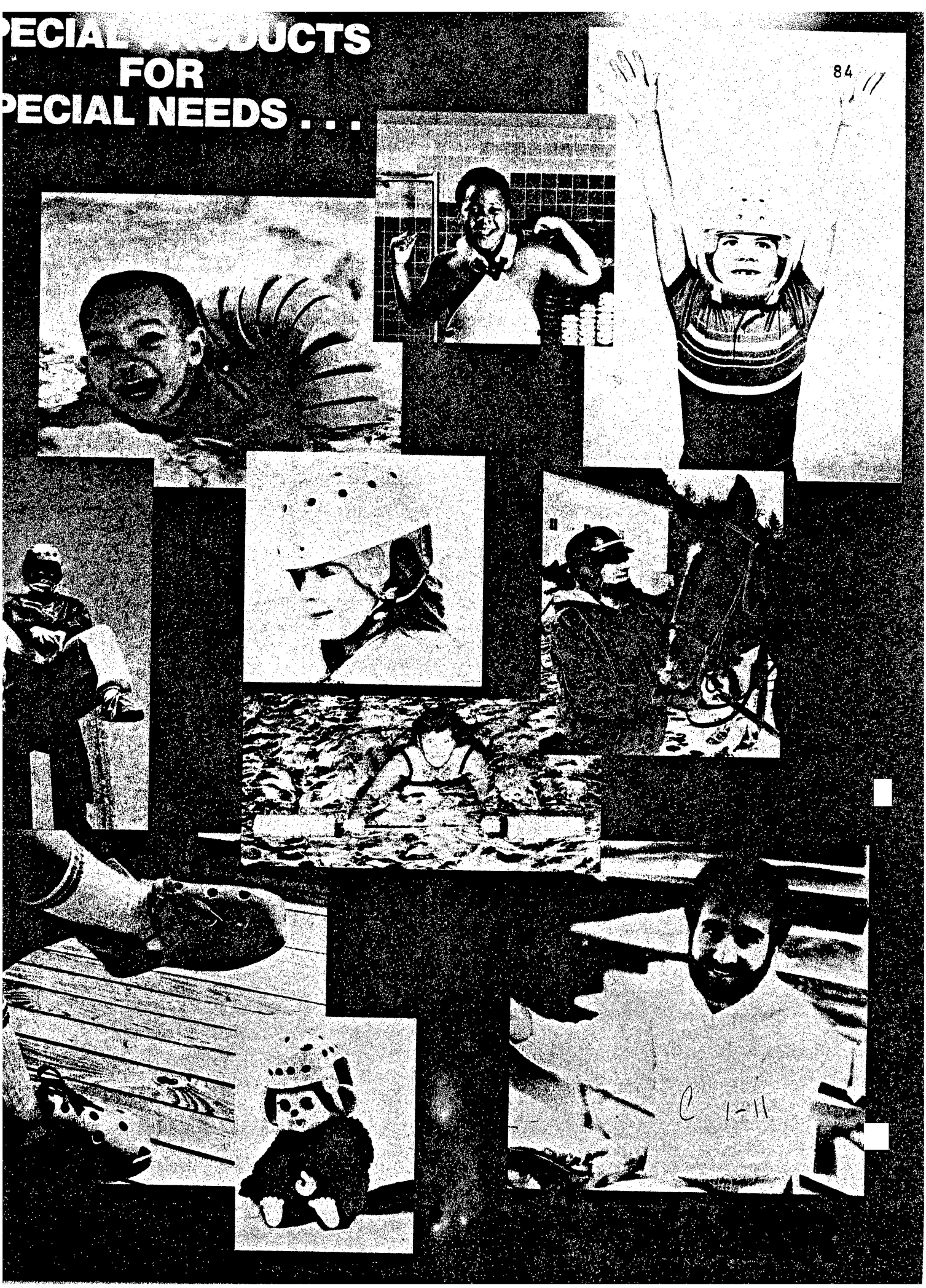
3. Past sport injuries
   - History of sport injury

4. Psychological Status
   - Participant's self-image (good,fair,poor)
   - Emotional development and stability (appropriate for chronologic age?)
   - Source of motivation:
     - Intrinsic- does person have personal goals for sport participation?
     - Extrinsic- is person responding to outside pressures, including physician's?

5. Social History
   - Parental attitude on sports participation
   - Financial status
   - peer relationships
   - Family/student awareness of school and community resources for athletic participation

6. Functional Assessment
   - Vision, hearing and balance
   - Speech communication
   - Mobility
     - Aids used, assistance needed

ECIAL ODUCTS FOR PECIAL NEEDS . . .



C 1-11

SWIM AID SPECIFICATIONS

Special 1" thick flotation foam (Ensolite®) is formed and bonded into various shapes and sizes to manufacture our Swim Aid line. An added feature is that this foam has insulating properties, thus helping to retain body heat. This foam is then triple-coated with a durable vinyl. Polypropylene webbing and special buckles resist chlorine and salt water deterioration. The finish used is a bright yellow color which is highly visible in the water. As with all of our product line, these Swim Aids are easily cleaned by hand with mild detergent. Avoid harsh chemical cleaners.

● Une mousse spéciale pour la flottation (Ensolite®), fabriquée par sa façonnerie en différentes formes et grandeurs, se soumet à trois couches de vinyle durable à jaune brillante. Les rubans (à sangles) et les boucles spéciales résistent au chlore et à l'eau de mer. Un détersif doux lave ces Aides de Nage facilement. Eviter les agents chimiques forts de mettoyage.

● Tres capas de vinilo durable de un amarillo subido se dan a la espuma especial de flotación (Ensolite®), que ha sido formada en varios figuras y tamaños. Tiras de tela y hebillas especiales resisten al cloro y al agua salada. Un detergente blando los limpia muy fácilmente. Evitar limpiadores químicos fuertes.

IMPORTANT: Supervision by competent personnel is essential while Swim Aids are in use.

La surveillance par un personnel exercé pendant l'usage de ces aides est indispensable.

Es esencial que un personal calificado supervise al usar estas Ayudas de Natación.

DELTA SWIM SYSTEM

Model: 8720 **Sizes: S-M-L**

A complete component system which provides for progressive swimming development! A wide variety of swim positions is facilitated by simply selecting the appropriate combination of parts. Any combination allows full freedom of arm and leg movement. The optional Add-A-Pad increases flotation as desired in the chest or back region. The unique back support and front section conform to the body and remain in position due to the unique crotch strap design. This flexible system is adaptable to meet multiple needs in the course of therapy. As the body's center of bouyancy is enhanced, that extra added "lift" increases confidence and self-assurance.

● C'est un système compréhensif à plusieurs éléments constitutifs qui subvient au développement progressif des habiletés de natation. N'importe quelle combinaison des articles permet aux bras et aux jambes de se mouvoir sans empêchement. Les sections uniques avant et arrière restent en place par suite de la forme de la bretelle à entre-jambes. Ce système flexible pent s'adapter pour satisfaire plusieurs besoins. Ce "coup de main" (haussement) supplémentaire augmente la confiance en haussant le centre de flottabilité (Voir l'option Add-A-Pad).

● Es un sistema completo de componentes que provee lo necesario para el desarrollo progresivo de habilidades de natación. Cualquier combinación de partes deja moverse los brazos y las piernas sin impedimento alguno. Secciones únicas delanteras y traseras quedan en posición, debido al proyecto de construcción de la correa de bragadura. Este sistema flexible es adaptable para satisfacer requisitos múltiples. Este "levantamiento" aumenta la confianza realzando el centro de flotación del cuerpo. (Ver la opción Add-A-Pad.)

C-2

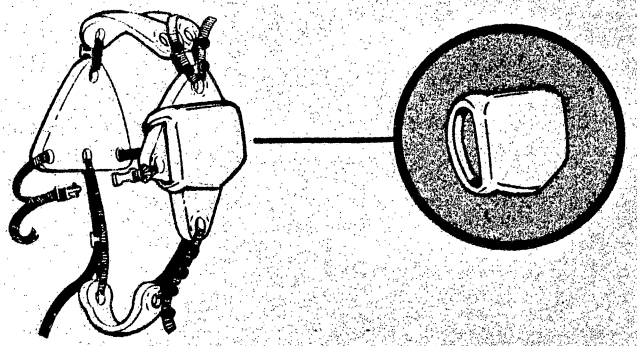
TRI-SWIM AID ▶

Build confidence and independence with this simplified version of our Delta Swim System. Ideal for any situation where a moderate amount of lift is required to maintain the traditional swim position. Optional Add-A-Pad may be ordered and used for additional flotation. The Tri-Swim Aid motivates any beginning swimmer and is valuable to therapeutic or geriatric situations where minimal assistance is needed. Reduced flotation support and freedom of movement make this Aid extremely beneficial to a wide variety of individuals.

Model: 8728 **Sizes: S-M-L**

● On peut faire se développer l'indépendance en se servant de cette version simplifiée du Système de Nage Delta. Cette aide motivera n'importe quel nageur qui commence en donnant un certain haussement modéré pour soutenir la position traditionnelle de nage, et vaut bien pour les situations thérapeutiques ou gérontologiques. (Voir l'option Add-A-Pad.)

● Se puede desarrollarse la independencia sirviéndose de esta versión simplificada del Sistema de Natación Delta. Proporcionando un levantamiento moderado para mantener la posición tradicional de natación, motiva a cualquier nadador novicio y vale para situaciones terapéuticas o geriátricas. (Ver la opción Add-A-Pad.)



◀ ADD-A-PAD

This option is offered to modify the Delta Swim System and Tri-Swim Aid in order to give added flotation in the chest or back region. These pads are easily slipped on the Swim Aid and raise the body in the water as desired.

Model: 8721 **Sizes: S-M-L**
8722 (Double thickness) **M-L**

● Cette option s'offre pour modifier le Système de Nage Delta et l'Aide Tri-Swim pour donner plus de flottation dans les régions de la pottrine et du dos. Ces bourrelets peuvent être mis facilement sur les Aides de Nage et lèvent le corps dans l'eau à souhait.

● Se ofrece esta opción para modificar el Sistema de Natación Delta y Tri-Swim Aid para proporcionar más flotación en las regiones del pecho o de la espalda. Es fácil poner estos cojincillos rápidamente en las Ayudas de Natación levantan el cuerpo en el agua según deseo personal.

◀ QUAD FLOAT SYSTEM

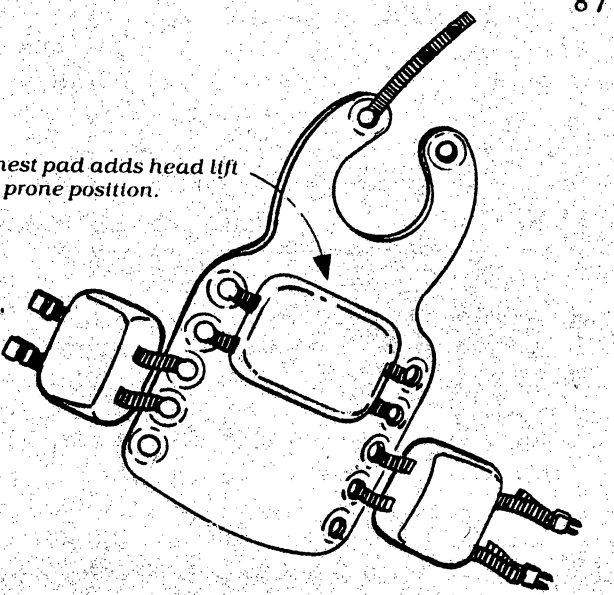
Use this Aid in situations of uneven muscle development or restricted arm and leg movement. The tendency toward lateral rotation is minimized by the use of side pads, either of which may be removed. When using this system, the person can be positioned on their back or chest.

Model: 8727 **Sizes: S-L**

)UAD FLOAT SYSTEM (cont.)

) On emploie cette Aide toutes les fois qu'il y a un développement inégal des muscles ou le mouvement des bras et des ımbes est empêché. L'usage de bourrelets aux deux côtés, ont chacun peut être ôté, réduit la tendance vers la rotation ıtérale au minimum. La personne peut se mettre sur le dos ou poitrine en se servant de ce système.

) Esta ayuda se usa en circunstancias del desarrollo desigual e los músculos o de movimiento restricto de los brazos y las iernas. El uso de cojincillos por dos lados cualquier de los ıales es separable, reduce la tendencia hacia la rotación lat-ral al mínimo. La persona puede ponerse o de espaldas o en pecho sirviéndose de este sistema.



Chest pad adds head lift in prone position.

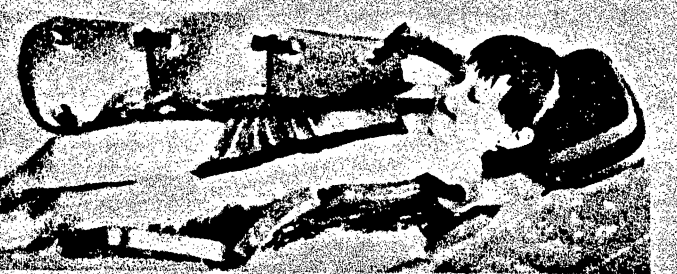
▼ SECTIONAL RAFT

Our unique sectional design provides support for the whole body, especially for those who are somewhat insecure in an aquatic setting.The head support section holds the head well above water level. Can be used by anyone for an enjoyable water experience.

Model: 8723 **Sizes: S-L**

) La forme unique en sections que nous avons projeté sou-ent tout le corps, surtout pour ceux qui s'inquiètent lorsqu'ils e trouvent dans un milieu aquatique. La section à soutenir la ète garde la tête bien au-dessus du niveau d'eau. Tout le ıonde peut se servir de ce radeau en mousse pour jouir d'une xpérience aquatique.

● Nuestra construcción seccional única le proporciona apoyo al cuerpo entero, sobre todo para las personas que se creen inseguras en un medio ambiente acuático. La sección para el apoyo de la cabeza tiene la cabeza por encima del nivel de agua. Cualquiera podrá usar esta balsa para gozar de una experiencia acuática.



The increase in independent movement and independence om physical support that has been gained with the use of anmar swim aids has been wonderful. Increased self-esteem nd attainable goals are results that have been made possible y Danmar products."

Valerie Romberg, Aquatic Director
B.A. Health & Physical Education

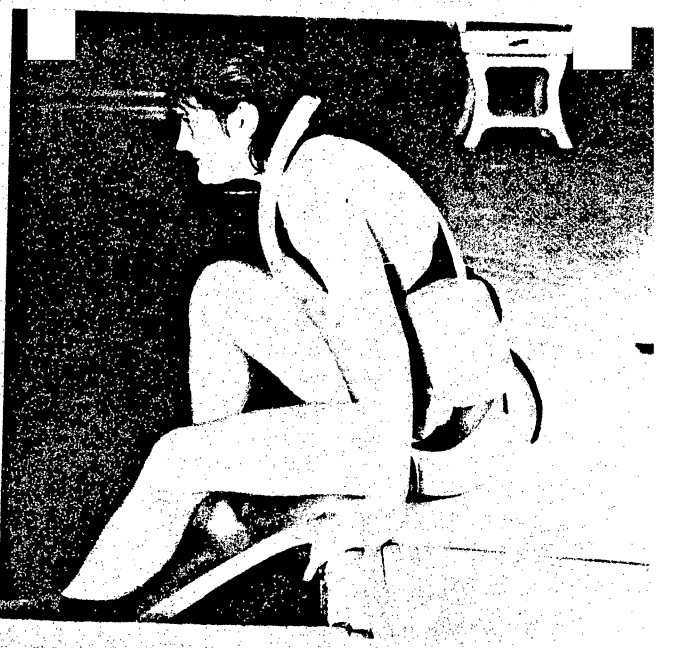
COMFORT MAT ▶

Hard surfaces hurt! This versatile mat is used in any situation where the comfort of a foam pad is essential. At the edge of a pool, when transferring a swimmer out of a wheelchair onto the pool deck, these mats are a must. In the shower, these moisture proof pads provide a soft floor covering. In the locker room, they can insulate against the cold tile floor. The Comfort Mat can be used also as a float for a child. Custom sizes up to 42″ × 56″ × 1″ are available upon request.

Model: 8730 **Size: 27″ × 41″ × 1″**

● Les surfaces dures peuvent faire du mal! Cette natte capable de plusieurs applications s'emploie où le confort d'un bourrelet en mousse est essential, par exemple, quand un nageur se transfère d'une voiture de malade au plancher du tillac à côté de la piscine. Ces bourrelets résistants à l'humidité isolent contre les carreaux froids de la douche ou de la salle à armoires fermantes à clef (d'un gymnase, etc.). La natte peut servir d'un radeau pour un enfant aussi.

● ¡Superficies duras pueden dolerle a Ud! Se usa este colchoncillo, hábil para muchas cosas, donde es esencial gozar de la comodidad de un cojincillo de espuma; por ejemplo, cuando se traslada un nadador de su sillón de ruedas a la cubierta de la piscina. Estos cojincillos, resistentes a la humedad, aislan los pies contra la baldosa fría de la ducha o de cuartos para armarios roperos, p.e., el vestuario de un gimnasio. Puede servir de flotador para un niño también.



"I am so pleased with your head float and swimming aids that I just had to get one for my son. It gives him so much freedom and self-confidence in the pool. Now we can go swimming and see him really be independent for the first time."

Ms. Donna Hutsler
Lakewood, Colorado

▲ STABILIZER BAR

An excellent exercise tool for strengthening the legs! Use it to maintain good balance. This lightweight bar utilizes foam flotation rings on each end to offer bouyancy. Rings can be removed singly as proficiency increases. This bar can be attached to our Sectional Raft and Quad Float System to help eliminate lateral rotation.

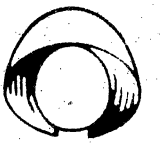
Model: 8729 **Sizes: One size**

● C'est un instrument excellent pour fortifier les jambes en exerçant! Cette barre légère a des anneaux de flottation en mousse aux deux bouts pour offrir plus de flottabilité. Les anneaux peuvent être ôtés un à un à mesure que la capacité avance. On peut attacher la barre à notre Radeau En Sections et au Radeau Quad, et ainsi éliminer la rotation latérale.

● ¡Sirve de un instrumento excelente para fortalecer las piernas! Es una barra ligera que tiene anillos de espuma a ambos extremos para dar más flotación. Se pueden quitar los anillos individualmente a medida que la pericia aumenta. Se puede atar la barra a nuestra balsa seccional y al Quad Flotator, y así eliminar la rotación lateral.

DANMAR PRODUCTS INC

2390 WINEWOOD
ANN ARBOR, MI 48103

PRICE LIST 113  1 MARCH 1985

Cushion Boots

Wheelchair Cushions

Custom Orders

Swim Aids

Headgear

Positioning Aids

Therapy Materials Kit

Specialty Items

ordering information

METHOD OF PLACEMENT: Orders may be placed by mail or telephone. Telephone orders must be confirmed in writing.

INCLUDE: Model Number, Product Name, Quantity, Size & Price.

DELIVERY: We ship UPS, UPS Air, or Air Freight. Our policy is to ship promptly. In Ontario we ship via UPS -- all other Canadian Provinces are served via Air Mail.

FREIGHT TERMS: Orders ship freight prepaid and added to invoice. All orders ship from Ann Arbor, MI.

PAYMENT TERMS: NET 30 DAYS for schools, centers, institutions, etc. Individuals can send prepayment, charge on Master Card/Visa, or accept C.O.D.

CUSTOM ORDERS: Due to their unique nature, custom orders take 3-4 weeks for delivery and are not returnable. Please request specification sheet for items of custom shapes/sizes.

WARRANTY: All Danmar Products are warranted against STRUCTURAL defects for 30 days from date of invoice.

EXCHANGES/REFUNDS: UNUSED standard line merchandise may be exchanged or refunded up to 30 days from invoice date. Custom orders may not be returned. Include pink inspection tags and invoice number with standard merchandise. After 30 days from invoice date, you must have authorization to return any merchandise. Call between 8:00 - 4:30 E.S.T.

FREE PRODUCT CATALOG AVAILABLE

HEADGEAR

specify size

discounts apply to orders of the same or assorted items

		1-5	6-23	24up
9820	Soft Shell Helmet	24.70	23.45	21.00
9821	Hard Shell Helmet	38.90	36.90	33.75
9822	Hard Shell Helmet with Face Guard	87.50	83.30	76.50
9823	Chin Guard - small or standard size	14.40	13.60	12.25
9824	Hard Shell Helmet with Face Bar	55.50	52.75	47.20
9840	Standard Riding Helmet	42.20	40.00	37.40
9845	Deluxe Riding Helmet	47.00	44.65	38.70

Specialty Headgear

For those who need our STANDARD HELMETS in sizes particularly small or large, request specifications necessary for the fabrication of these helmets.

Accessories & Replacement Items

7630	Face Guard - specify helmet size	49.90	47.40	43.20
7631	Chin Strap	3.50		
7632	Face Bar HARDWARE (replacement set)	3.90		
7633	Crown Pad	4.50		
7634	Back of neck retention strap	4.00		
7635	Liner Cushion 1/4" OR 1/2" thickness	6.70		
7636	Face Bar - specify helmet size	21.50	20.40	18.30
7637	Cush-In-Pads (set of 8)	4.00		
7638	Liner Cap - specify helmet size	2.95	2.30	
7639	Face Guard Liner Cushion	8.00		
7640	Velcro Chin Strap	4.00		
7641	Faceguard Tab (white plastic)	.75	.65	
7642	Faceguard HARDWARE (replacement set) (plastic tab, screw, t-nut, washer & extended washer)	1.25	1.00	
7643	Chin Strap with Quick Release Buckle	5.00		
7645	Liner Replacement for hard shell helmet (helmet must be returned to us)	20.00		

CUSHION BOOTS

2580	Cushion Boots	32.80	31.10	27.90
2581	Cushion Boots with Tread Sole	39.80	37.80	33.90

SIZES: small $7\frac{1}{2}$-$8\frac{1}{2}$" medium $8\frac{1}{2}$-$9\frac{1}{2}$" large $9\frac{1}{2}$-$10\frac{1}{2}$" x-lg $10\frac{1}{2}$-$11\frac{1}{2}$"

SPECIALTY ITEMS

5270	T-Shirt child/adult	7.50	*	*
5280	Danmar's Mascot - "DANNIE"	14.75	*	*
5281	"DANNIE" replacement 9820 soft shell helmet	9.00	*	*

HEADGEAR CUSTOMIZATIONS

This **specialized** department came into existence in response to many requests for specific individualized equipment. In addition to custom sizing, the following options have been developed. Our experienced staff is available to discuss particular situations not addressed in this listing.

SPECIFICATIONS & QUOTATIONS AVAILABLE UPON REQUEST FOR HELMETS FOR SPECIAL HEAD SHAPES & SIZES.

3459 HARD SHELL EAR COVERING 25.00

An inside layer of soft foam covered by a hard polycarbonate exterior is attached to a hard shell helmet, extending down over the ear area.

3460 SOFT FOAM EAR COVERING 20.00

Ventilated 1/2" Ensolite foam is extended in the soft shell helmet, bringing it down over the ear area.

3461 VENTILATION HOLES IN FACE GUARD 20.00

In place of the eye and/or mouth opening, 1/4" ventilation holes are drilled and smoothed in the face guard. SPECIFY AREAS WHERE VENTILATION HOLES ARE WANTED.

3463 UPPER STABILIZING SIDE TABS 20.00

Face guard held securely in position by the placement of polyethylene supports on both sides of the hard shell helmet. Also available using quick release buckles to retain the option of the pivoting action. SPECIFY PERMANENT MOUNT OR PIVOT MOUNT.

3464 BUMPER PADS 25.00

Four outer foam pads (1" x 4" x 1½") are bonded to soft shell helmet offering extra cushioning and padding.

3465 CUSTOM COLORS 20.00

Choice of Royal Blue, Navy Blue, Scarlet Red, Forest Green, Golden Yellow, Real Maroon, Orange Orange, Royal Purple, Black or White -- on 9820 helmet or liner only of 9821/9822/9824.

3466 REINFORCED LINER - FULL HELMET 25.00

In situations of very hard use, reinforced vinyl material is bonded to 9820 or 9821, strengthening and adding to the life of the helmet.

3467 REINFORCED SEAMS &/OR SLINGS 20.00

Reinforced vinyl material bonded to 9820 or 9821 helmet SEAMS AND/OR SLINGS ONLY, to strengthen these areas in situations where there may be exceptional stress or pulling.

3469 QUICK RELEASE BUCKLE CHIN STRAP 12.00

For easy on and off, this buckle & chin strap attaches to any of our helmet line and is squeezed to open quickly. SPECIFY NORMAL - UNDER CHIN SIDE OPENING OR TOP OF HELMET OPENING (when frequent attempts to remove helmet may occur).

Head circumference at eyebrows required for any custom helmet.

Please note: custom equipment is not returnable.

SWIM AIDS

specify size

discounts apply to orders of the same or assorted items

			1-5	6-23	24up
720	Delta Swim System	Weight			
	small	30- 50 lbs	37.90	36.00	32.30
	medium	65-135 "	49.90	47.40	42.50
	large	180-210 "	59.90	56.90	51.00
721	Add-A-Pad/Pad Plus [illegible]				
	small	50- 65 lbs	14.20	13.50	12.10
	medium	135-155 "	15.20	14.50	12.90
	large	210-240 "	16.20	15.50	13.80
723	Sectional Raft	Height			
	small	36-54"	125.50	119.30	113.00
	large	54-74"	149.20	141.70	132.00
724	Multi-Purpose Swim Rings	Weight			
	x-small		25.20	23.90	21.50
	small	20- 80 lbs	34.10	32.40	28.90
	large	80-200 "	41.60	39.50	35.40
725	Head Float				
	x-small		29.50	28.00	25.10
	small	20- 50 lbs	46.60	44.30	39.70
	large	50-175 "	58.90	55.90	50.10
727	Quad Float System				
	small	30- 75 lbs	61.10	58.00	52.00
	large	75-190 "	75.70	70.90	64.40
728	Tri Swim Aid				
	small	30- 50 lbs	22.00	19.80	18.70
	medium	65-135 "	27.70	26.30	23.60
	large	180-210 "	32.60	30.90	27.80
729	Stabilizer Bar		41.40	39.80	37.50
730	Comfort Mat (27" x 41" x 1")		67.90	64.50	57.80
741	Adapted Aquatics Cassette Tape		13.50	"	"

Accessories & Replacement Items

7730	Quad Float without Side Pads			
	small		45.50	
	large		56.40	
7731	Sectional Raft Sections with straps/snaps, etc.			
	small		14.00	
	large		16.00	
7732	Delta Crotch Strap	sm/med/lg	all 7.50	
7733	Delta/Tri Neck Collar		small 8.50	
			med 9.50	
			lg 10.50	
7734	Sectional Raft - shortened model (two rows)		small 108.50	
			large 130.20	

is not just a buoyancy aid . . . it is a swimming support which has been scientifically designed to give the Learner Swimmer water confidence and a natural swimming position.

A Complete Swimsuit . . . made of top quality stretch nylon fabric, the Polyotter fits snugly, yet allows perfect freedom of movement, because the flotation units are positioned in pockets around the lower rib cage and upper abdomen . . . thus, the arms are free and unrestricted for overarm or breast-stroke swimming movements.

With Variable Buoyancy . . . the Polyotter is ideal for swimming novices of any age for, because of its varying buoyancy facility, it fully supports all users. With increasing proficiency, swimmers can reduce the number of floats until, when competent and confident, they need no buoyancy at all.

There is a Polyotter Floatsuit to fit you, whether you are 1 year old or 81!

IT'S ABSOLUTELY SAFE . . .

. . . AND IT'S FUN TO USE!

Unique, All British . . .

and considered the **Rolls-Royce** of swimming aids, the Polyotter inspires confidence, the positive buoyancy inherent in the solid polystyrene floats means that even an absolute beginner can enter the water, safe in the knowledge that the Floatsuit will not ride up, slip around or throw the learner off balance.

Like the Rolls, the **Polyotter** has a satisfactory working **life of many years,** when used with care.

Elliott House · Church Street · KINGSBRIDGE · Devon TQ7 1BY
Telephone: Kingsbridge (0548) 3711

94

	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	Ins.
T SIZE	51	56	61	66	71	76	81	86	91	97	102	107	112	c.m.

As a guide to size, the average child will require the following —
2 years 20" 3-4 years 22" 5-6 years 24" 7-8 years 26" 9-10 years 28"

High quality knitted stretch Nylon fabric.

Royal Blue or Scarlet

olyotter Floatsuit has been
ted by the London Design Centre
widely acclaimed by leading
rities throughout the United
om
tensively used by Physical Training Experts, Education Authorities, Her Majesty's Forces, and Physiotherapists, to name but a few.

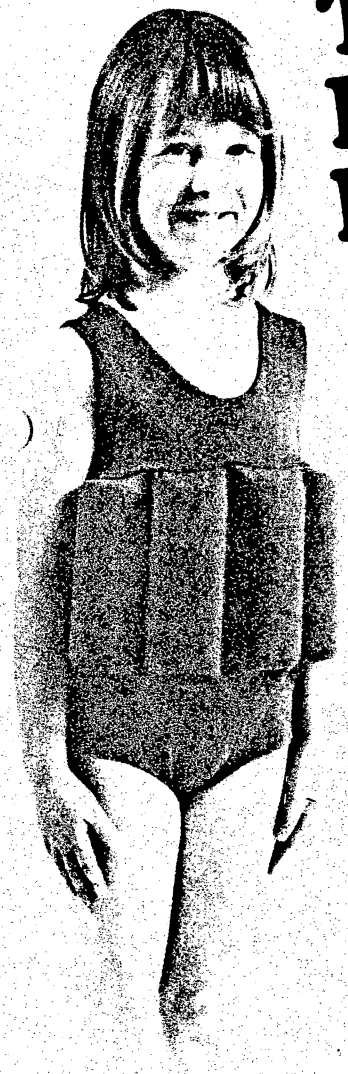
Available through your local Sports Outfitter, Swimming Pool and Allied Contractor. In case of difficulty contact manufacturer.

RTANT: 1. *The Polyotter Floatsuit must* ***NOT*** *be regarded as a* ***LIFE JACKET.***

2. *The Polyotter Floatsuit is only recommended for children under 3 years of age or weighing less than 28 lbs. (13 kg.) when accompanied* ***IN THE WATER*** *by an adult, and under close (almost contact) supervision.*

3. *Ensure that your Polyotter Floatsuit is a* ***SNUG*** *fit — it will stretch in water.*

YOTTER LTD., Kingsbridge, Devon, England. Telephone: 0548 3[illegible]



The POLYOTTER FLOATSUIT

POLYOTTER FLOATSUIT

U.K. PATENT No. 992764

The Polyotter Floatsuit is much more than a buoyancy aid.
t is a swimming support which has een scientifically designed to give the arner Swimmer water confidence d a natural swimming position.

he Polyotter Floatsuit inspires nfidence . . . . the positive buoyancy herent in the solid polystyrene floats means that even an absolute beginner can enter the water, safe in the knowledge that the Floatsuit won't ride-up, slip around or throw the learner off balance.

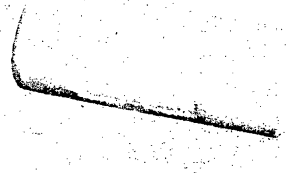
It's a complete swimsuit . . . . it fits snugly yet allows complete freedom of movement, because the floatation units are positioned in pockets around the lower rib cage and upper abdomen. . . . Thus the arms are free and unrestricted for overarm or breaststroke swimming movements.

It's absolutely safe and it's fun to use!

Positive buoyant support

The 20" and 22" Polyotters have MICRO-FLOTATION (two floats to each pocket) and the larger sizes longer floats (one to each pocket) which increase in size according to chest measurements and presumed relative increase in body weight.

All float sizes have been carefully calculated to give optimum buoyancy whether in fresh water or sea water.



Learning to swim with a Polyotter

individual buoyancy has been assessed, four or more floats can be inserted in order to achieve balance of buoyancy and swimming position.

Drawing the pupil into deeper water the parent or teacher will be able to see whether further floats or repositioning of the floats is required.

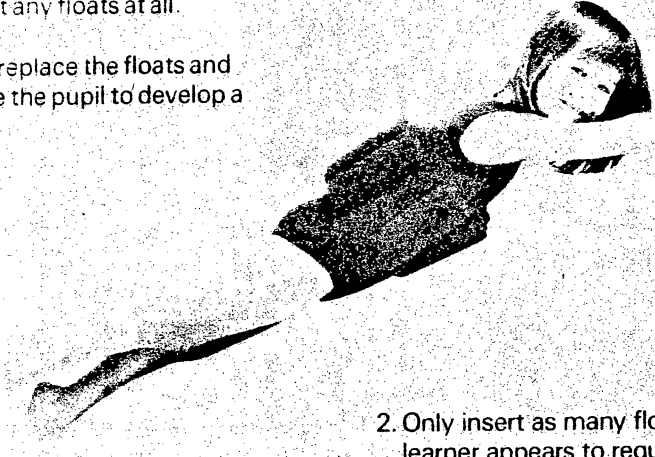
As swimming confidence grows remove one or two floats at a time until the swimmer feels assured enough to do without any floats at all.

Now . . . . replace the floats and encourage the pupil to develop a particular stroke movement (overarm breaststroke).

The Floatsuit will aid a natural swimming position and greatly assist the learner at this stage.

Points to remember . . . .

1. Don't rush pupils . . . . let them become completely confident in th water; let them take their own time adjust to the buoyancy of the Polyotter Floatsuit.



2. Only insert as many floats as the learner appears to require.
3. Ensure that the Floatsuit is a snug – it will stretch in water.
4. A Polyotter Floatsuit will give new found confidence to the learner bu until you are also confident of the beginner's ability – they must be supervised!

EASY LADDER™

The safe, easy way to enter or exit a pool

triad technologies inc
4000 GALSTER RD., EAST SYRACUSE, NY 13057 (315) 437-4089

Who Needs The Easy Ladder?

- The elderly
- People with arthritis
- People needing recuperative therapy
- Young children
- Mothers-to-be
- Anyone who is prevented from using a pool because they can't handle a vertical pool ladder.

Therapeutically designed to eliminate strain. Allows gentle, upright pool entry and exit.

Comfortable handrails made of tubular stainless steel for durability and stability.

Non-skid tread strips for a safe and secure footing.

High visibility yellow molded-in color to aid visually impaired.

Aesthetically designed to fit into a recreational setting.

Portable—easy to remove for swim meets.

Flush to wall and floor—swimmer cannot get caught behind the EASY LADDER.

Locate in pool corner for minimum obstruction. Can also be used on side or end walls.

Durable fiberglass for years of virtually maintenance-free service.

D

TRANSFER TIER™

Independent pool access for persons with special needs

The answer to your pool access dilemma is Triad's TRANSFER TIER. By sliding onto our on-deck/ underwater unit, disabled and elderly persons can have the satisfaction and dignity of entering and exiting the water by themselves. The TRANSFER TIER will allow you to offer independence and the exhilaration of water activities to everyone. A handsome addition to any pool, and molded of fiberglass for lasting durability, Triad's TRANSFER TIER *will help your department meet federal accessibility requirements at a minimal cost to you.*

Short on deck space? Our TRANSFER TIER unit takes up only eight square feet, and because of its unique water stabilization design, permanent fastening or pool modifications are not necessary. In fact, it can be relocated in minutes.

Ideal for other areas, too . . . outdoors, in the schoolroom, in the home. Used alone, the upper unit gives persons with special needs the ability to leave their wheelchairs or braces and get down to ground level, with little or no assistance.

You can open an exciting vista of experience, fun, and freedom by offering personal accessibility to indoor and outdoor recreation with Triad's TRANSFER TIER.

triad technology inc
6005 GALSTER RD., EAST SYRACUSE, NY 13057 (315) 437-4089
5890 Pierson Rd., Fayetteville, NY 13066

Bibliography: Books, Audiovisuals, Products, and Organizations

Books

The American Red Cross, Methods In Adapted Aquatics: A Manual For Instrustors, Washington, D. D., American Red Cross.

Beeman, M.: Scuba Diving for the Handicapped Project. Irvine, California, Veterans Affairs Office T-808, University of California, Irvine, 1978.

Audiovisuals

"Splash" (16mm, sound, color, 21 minute). Documentary films, 3217 Trout Gulch Road, Aptos, California, 95003.

"Swimming for a Congenital Quad Amputee"(16mm, silent, black and white, 10 minute). Instructional Media Center, University of Texas, University Station, Austin, Texas 78712.

"Body Position of Young Paraplegics in Water" (20 minute, color, instructional). Institute for Rehabilitation. U. Behinderiensport, DJHS Koeln Carl Diem Weg, 500 Koeln 41, West Germany.

Products

Polyotter Float Suit, belts, harnesses, and floats. Polyotter Limited, Elliott House, Churgh Street, Kingsbridge, Devon TQ7 1BY.

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Bibliography: Books, Audiovisuals, Products, and Organizations contd.

Products contd.

Easy Ladder. Triad Technologies Inc. 4000 Galster Road, East Syracuse, New York 13057.

Transfer Tier. Triad Technologies Inc. 6005 Galster Road, East Syracuse, New York 13057.

Delta Swim System, Tri-Swim Aid, Add-A-Pad, Quad Float System, Sectional Raft, Head Float, Multi-Purpose Swim Rings, Comfort Mat, Stabilizer Bar. Danmar Products, Inc. 2390 Winewood, Ann Arbor, Michigan 48103.

Organizations

Human Kinetics Publishers, Inc. P.O. Box 5076 Champaign, Illinois 61820.

California Association For Health, Physical Education, Recreation and Dance. 2000 Marconi Ave. B2, Sacramento, California 95821/9990.

Handicapped Scuba Association, 1104 El Prado, San Clemente, California 92672.

National Handicapped Sports and Recreation Association, 4105 E. Florida Avenue, 3rd floor Capital Hill Station, POB 19664, Denver, Colorado 80222.

Bibliography: Books, Audiovisuals, Products and Organizations contd.

Organizations contd.

Wheelchair Sports Medicine Task Force, P.O. Box 10424 San Jose, California 95157/1424.

Adaptive Recreation Program City of Santa Barbara, 620 Laguna Street, Santa Barbara, California 83102.

Recreational Outdoor Adventures for Disabled Students, American Red Cross-Los Angeles Chapter, 1200 S. Vermont Avenue, Los Angeles, California 90006.

PUBLICATIONS, PRODUCTS and ORGANIZATIONS relating to sport and recreation or vacation for the person with a physical disability.

PUBLICATIONS:

Access Travel: Airports, Washington, D. C. 20202 (free copy)

Whole Person Tours, INC. 1986 Accessible Tours, Box 1084, Bayonne, New Jersey 07002-1084

Consumer Information Catalog, P.O. Box 100 Pueblo, Colorado 81002

1985-86 Catalog, Human Kinetics, Publishers, P. O. Box 5076, Champaign, Il 61820

California Association for Health, Physical Education, Recreation and Dance, 2000 Marconi Ave. B2, Sacramento, Calif. 95821-9990

The Exceptional Parent, 605 Commonwealth Ave, Boston, Ma 02215

DAV Magazine, 3725 Alexandria Pike, Cold Spring, Ky. 41076

U.S. Department of Education National Institute of Education, Educational Resources Information Center (ERIC), Wash. D. C. 20208

Physical Fitness Testing of the Disabled-Project Unique, Human Kinetics Publishers, Inc. Champaign, Illinois, 61820

PRODUCTS: companies

Danmar Products, Inc., 2390 Winewood Avenue, Ann Arbor, Michigan 48103 (aquatics)

The Funway Corporation, 15940 Warwick Road, Detroit, Mi 48223 (biking)

Bill Blackwood, 1117 Rising Hill, Escondido, Ca 92025 (flying)

Art Javes Designs, 4914 17th Ave. Gulfport, Fl 33707 (canoeing)

Smithsled Mountain Smith, 12790 W. 6th Place, Golden, CO 80401 (skiing)

George Snyder, 5809 NE 21st Ave. Ft. Lauderdale, Fl 33380 (bowling)

Dunmark Manufacturing Company, P.O. Box 266, 543 Timothy Street, Newmark Ontario (archery)

Wheelchair Adaptations, Don Rogers, Recreation Coordinator Methodist Hospital, Gary, IN 46402 (wheelchair adaptations)

Kaye's Kids,1010 E. Pettigrew St. Durham, NC 27701-4299 (kid's toys)

Directory of Recreational Organizations

American Alliance for Health, Physical Education, Recreation, and Dance
Unit on Programs for the Handicapped
1900 Association Drive
Reston, VA 22070

American Camping Association
5000 State Road, 67 North
Martinsville, IN 46151

Boy Scouts of America,
Scouting for the Handicapped
1325 Walnut Mill Lane
Irving, Texas 75308-3096

California Wheelchair Aviators
117 Rising Hill
Escondido, California 92025

United States Quad Rugby Association
811 Northwestern Drive
Grand Forks, North Dakota 58201

Canadian Wheelchair Sports Association
333 River Rd.
Ottawa, Ontario
K11 889 Canada

Disabled Sportsmen of America, Inc.
P.O. Box 5496
Roanoke, Virginia 24012

Girl Scouts of the USA,
Scouting for the Handicapped
830 Third Avenue
New York, NY 10022

4-H Youth Extension Service
United States Dept. of Agriculture
Washington, D.C. 20250

Wheelchair Pilots Association
11018 102nd Avenue
Largo, Florida 33540

National Junior Horticultural Association
c/o American Horticultural Society
Mount Vernon, VA 22121

National Wheelchair Athletic Association
2107 Templeton Gap Road, Suite C
Colorado Springs, CO 80909

National Wheelchair Basketball Association
c/o AARA
815 N. Weber, Suite 203
Colorado Springs, CO 80903

National Wheelchair Basketball Association
110 Seaton Blvd., University of Kentucky
Lexington, KY 41506

National Wheelchair Motorcycle Association
101 Torrey Street
Brockton, MA 03401

National Wheelchair Softball Association
P.O. Box 737
Sioux Falls, South Dakota 57101

North American Riding for the Handicapped Association
Box 100
Ashburn, VA 22011

The Paralyzed Veterans of America
4350 East West Highway, Suite 900
Washington, D.C.

Special Olympics, Inc.
Kennedy Foundation
1701 K Street, N.W.
Suite 215
Washington, D.C. 20006

United States Amputee Association
Route 2, County Line
Fairview, Tennessee 37062

Handicapped Boaters Association
P.O. Box 1134
Ansonia Station, NY 10023

Handicapped Scuba Association
1104 El Prado
San Clemente, CA 92672

International Committee of the Silent Sports
Gallaudet College
800 Florida Avenue and 7th Street, N.E.
Washington, D.C. 20002

International Foundation for Wheelchair Tennis
2203 Timberloch Place, Suite 126
The Woodlands, Texas 77380

International Wheelchair Road Racers Club, Inc.
165 78th Avenue NE
St. Petersburg, Florida 33702

Louis Braille Foundation for Blind Musicians
215 Part Avenue South
New York, NY 10003

Mobility International USA
P.O. Box 3551
Eugene, OR 97403

National Archery Association
1750 E Boulder Street
Colorado Springs, CO 80909

National Arts and the Handicapped Information Service
National Endowment for the Arts
2401 E Street, N.W.
Washington, D.C. 20506

National Association for Sports for Cerebral Palsy
66 East 34th Street
New York, NY 10016

National Foundation for Wheelchair Tennis
3857 Birch Street, Suite 411
Newport Beach, CA 92660

National Handicapped Sports and Recreation Association
Capitol Hill Station
P.O. Box 18664
Denver, Colorado 80218

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Graver, Denis. "HSA Promotes Diving to Handicapped Youth." NDA News, July 1985, p.10.

Irmer, Larry D. Physical Education Opportunity Program for Exceptional Learners (PEOPEL). National Diffusion Network (DHEW/OE), Washington, D. C., August 1980. p. 219.

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Smith, Marylou. "Competitive Swimming." Sports 'N Spokes, October 1977, pp. 66-67.

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U.S. Department of Education National Institute of Education. Sports and Recreation Programs for the Child and Young Adult with Physical Disability. Winter Park, Colorado, Conference Proceedings 021, 1983.

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"Wheelchair Sports and Recreation." Sports 'N Spokes. July/August 1985, pp. 17-20.

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