## THE BENEFITS OF SPEED SKATING

Ice Speed Skating is the oldest of the three forms of ice skating. As an early form of transportation, ice skating allowed the crossing of frozen rivers, lakes and channels in an efficient manner. It quickly became a form of early competition making its participants the fastest humans using no other equipment but their own strength to reach speeds of 25 to 30 miles per hour.

Speed Skating today is a lifetime fitness sport for individuals of all ages. Speed Skating provides both cardiovascular and aerobic benefits as well as improving muscle strength, balance, and coordination. Today, the sport can be enjoyed year round with indoor skating facilities found throughout the world. Probably the BEST type of Speed Skating is that which is done outdoors, challenging the skater against the elements of nature that try to test the skater's skill, fatigue and desire to race the wind.

As a recreational and competition sport, Ice Speed Skating offers the potential for social integration for both training and competition experiences within multi-level Special Olympics competition experiences as well as training and competition experiences through this sport's National Governing Body.

## A PREVIEW OF THE SPEED SKATING EVENTS OFFERED

Competition experiences in Ice Speed Skating is offered in two areas: sport skills and race competition events. Sports skills events are designed for participants just beginning the sport and should be offered at the Local and Area level. An event for those with physical challenges and requiring the use of an assistive device is also offered. Race competition events for intermediate and advanced speed skaters and are offered at Local, Area, Chapter, National and World competitions.

## SPECIAL OLYMPICS JOB DESCRIPTION

Position: Coach
Description: The Special Olympics coach is responsible for providing athletes with comprehensive sports training and preparation for competition according to the Special Olympics Purpose, Mission, and Philosophy.

## Responsibilities:

1) Select, assess, and train Special Olympics athletes.

- The Special Olympics coach will recruit athletes and complete and submit all required medical and registration materials by established deadlines.
- The Special Olympics coach will assess the skill of each athlete or team to determine the appropriate events and levels for training and competition in the selected sports.
- The Special Olympics coach will develop individual training programs for each athlete including fundamental skill instruction, strength and conditioning activities, and instruction on competition and rules. This training program will be a minimum of eight weeks duration.

2) Know, understand, and abide by the Official Special Olympics Sports Rules.
3) Know and understand the sport being coached.
4) Work to develop family support to enhance athlete training opportunities.
5) Make sport training and competition a fun experience.
6) Execute the legal duties of a coach:

- Provide a safe environment
- Properly plan the activity
- Evaluate athletes for injury or incapacity
- Match or equate athletes
- Provide adequate and proper equipment
- Warn of inherent risks in the sport
- Supervise the activity closely
- Know emergency procedures and first aid
- Have a first aid certified coach on site at all training sessions.
- Keep accurate records.

A 90-minute Orientation for family members before the start of the season might include:

- Introduction of coaches and volunteers
- Special Olympics Mission and Philosophy
- Coaching Philosophy
- Demonstration by athletes, or slides, or video of athletes in the sport
- Program specifics - dates, times, procedures
- How families can help
- Questions and answers


## HELP FOR THE COACH

FAMILIES are encouraged to take an active role in the Special Olympics program. Coaches may call upon family members of all ages to help as:

- Assistant coaches
- Recruiters of athletes or other volunteers
- Fund-raisers for the program's equipment and uniforms
- Transportation providers
- Record keepers
- Chaperones for travel.

SPECIAL OLYMPICS PARTNERS CLUBS® ${ }^{\circledR}$ are in existence in hundreds of schools across the United States and are beginning all over the world. Student groups volunteer their time to help as 1-on-1 peer coaching assistants and teammates. Special Olympics International provides Partners Club ${ }^{\circledR}$ manuals to help a school organize and establish this program. "Partners Club® and You" brochures are also available.

SPECIAL OLYMPICS SPORTS PARTNERSHIPS involve schools' varsity and/or junior varsity teams. A Special Olympics team or athlete trains with the school's team but compete against athletes of comparable age and ability. Each team will warm up, stretch, condition, and cool down together. Athletes without disabilities serve as peer coaches, scrimmage teammates, and boosters.

OTHER SPECIAL OLYMPICS VOLUNTEERS help to organize all the Special Olympics sports programs offered in your community, state or national program. The United States chapters and many national programs, communities, provinces, or counties often have Area committees or Boards headed by a Manager or Coordinator. These volunteer colleagues will be your resources on:

- How to find eligible athletes
- Procedures for fund raising
- Training for coaches and assistants
- Dates for upcoming competitions.

In most chapters or national programs, there will also be a volunteer Sport Director who is the expert in the sport, helping to administer coaches training and major competitions. This person is the primary resource on:

- Sport rules
- Sport training techniques for athletes
- Finding clinicians for sport training schools
- Finding sport officials for small competitions.

COACHES CERTIFIED TRAINING COURSES are offered for three different skill needs of coaches:

- Volunteer Coach Course
- Principles of Coaching Course
- Advanced Coach Course.

Certification requires:

1) General Session (at least once)
2) Sport-Specific Course
3) 10-hour follow-up Practicum with the athletes
4) Completion and mailing of certification form.

The GENERAL SESSION provides a 90 -minute classroom introduction to Special Olympics. It is designed for volunteers, chaperones, family members, and professionals who have an interest in providing sports training for individuals with mental retardation. The course contains information on the Special Olympics philosophy, program, organization, rules, sports training, and competition opportunities.

The VOLUNTEER COACH COURSE is a 6-hour sport-specific instructional training school addressing the fundamental principles of "coaching" Special Olympics athletes. The course focuses on coaching philosophy, sports psychology, planning, and administration. This course is strongly recommended for all coaches, especially those who will serve as "head coaches" or who will organize local training programs.

The ADVANCED COACH COURSE is a 6-hour training school designed for coaches who want to increase their knowledge of advanced sport-specific coaching. The course features in-depth sport skills development, advanced training principles, and competition strategies as well as hands-on training with Special Olympics athletes.

## MATERIALS

Specific sport training materials for the competitive coach and the official are available from the Amateur Speed Skating Union of the United States (for speed skating programs in the United States) and the Canadian Amateur Speed Skating Association (for speed skating programs in Canada). Other Chapter programs should check with their respective Speed Skating National Governing Body on materials available. Both the ASU and CASSA offer catalogs on materials available for purchase, or items available as part of a membership in the organization.

Items available include manuals, badge programs, and promotional materials that may be useful in training and recruiting skaters and volunteers.

Special Olympics Official Winter Sports Rules, available from your Program or National office.

## Videos

Both CASSA and the ASU have video selections that are available for loan to members as well as tapes that are available for purchase. Again, contacting your respective National Governing Body is recommended. Special Olympics International Sports Training Department also maintains a small library of videos that are available on a loan basis.

## Commercially Available Materials

While there is a very limited amount of commercial materials available on Speed Skating, the following listed are just a sampling of what one might be able to purchase:

The Complete Handbook of Speed Skating by Dianne Holum, \$39.95, available from High Peaks Cyclery, 18 Saranac Avenue, Lake Placid, NY 12946.
A.S.U. Summer Training Video, $\$ 29.95$ (plus shipping), available from GEM \& Associates, Inc., 2300 Parkwoods Road, Minneapolis, MN 55416

SPEED SKATING TIMES (8 issues), \$15.00, available from Speed Skating Times, 2910 N.E. 11 Avenue, Pompano, FL 33064

## SPEED SKATING ORGANIZATIONS

## INTERNATIONAL SKATING UNION (ISU)

International Governing Body for ice figure skating and ice speed skating. Responsible for competition regulations for World and Olympic level competitions. Contact the ISU at Promenade 73, 7270 Dovas-Platz, Switzerland.

## UNITED STATES INTERNATIONAL SPEED SKATING ASSOCIATION (USISSA)

National Governing Body for speed skating in the United States. Responsible for World and Olympic level teams. Works very closely with the Amateur Speed Skating Union of the United States to train and develop Speed Skating.

## AMATEUR SPEED SKATING UNION OF THE UNITED STATES OF AMERICA (ASU)

The ASU is independent from but works very closely with USISSA in skater training and development. The ASU is comprised of member associations throughout the United States that conduct training and competition on the local, association, and national levels. As part of its mission, the ASU provides skater training, coaches training, and development information on the sport of speed skating. The ASU offers educational materials on skating, organizing a speed skating club, and running speed skating competitions. These materials are available at a nominal cost. A catalog of available materials can be received by writing the ASU National office. Membership in the ASU is open to all citizens of the United States. A non-skater membership is available for coaches and a Special Needs Skater classification is available for Special Olympics skaters. Contact the Amateur Speed Skating Union of the United States of America, 1033 Shady Lane, Glen Ellyn, IL 60137.

## CANADIAN AMATEUR SPEED SKATING ASSOCIATION (CASSA)

CASSA is the Canadian counterpart of USISSA-ASU. CASSA is greatly involved in the Special Olympics movements and offers training for coaches and assists in conducting competition for Special Olympics skaters. This organization also offers a wide variety of educational materials at a nominal cost. A listing is available by writing the CASSA National Office, 333 River Road, Ottawa, Ontario, K1L 8B9, Canada.

Coaches in other countries should contact their respective Olympic level sport organizing committee to get the name and address of the National Governing Body. The NGB has information on Speed Skating training and only needs to be contacted.

The ISIA provides organization for recreational ice figure skating, speed skating, and hockey. The ISIA member organizations are mainly skating rinks. The ISIA provides coaches training and certification, and skater training and competition. Contact the ISIA, 355 West Dundee Road, Buffalo Grove, IL 60089.

## RECRUITING ATHLETES

The size of your program will depend upon many things -- how many coaches and assistants are available, how much individualized attention each athlete requires, space and equipment available, and scheduling and transportation concerns. The appropriate training program can range from one athlete getting private instruction and practice time to a busload of athletes in a large facility moving from skill station to skill station in smaller groups.

Athletes are most often recruited through those organizations in your community that provide services to individuals with mental retardation. They may include:

- schools
- residential facilities
- group homes
- associations servicing citizens with mental retardation
- supported work environments or employment settings.

Referrals from family members who have relatives in Special Olympics programs and from Special Olympics athletes themselves can provide additional sources of new athletes. However, individual athletes beyond school age who live with their families are often hardest to identify. Publicizing your program to churches, parks and recreation departments, and other civic associations will help to get the information to a broader base of potential athletes.

## RECRUITING UNIFIED SPORTS® TEAMMATES

There are a few basic considerations in selecting appropriate individuals to serve as teammates on Unified Sports ${ }^{\circledR}$ teams. Teammates must first match in age and ability with Special Olympics athletes. Second, these individuals must also be willing to make a commitment to practice as well as to compete. Unified Sports® is not simply a one day event where teammates are matched with Special Olympics athletes at the competition site. Furthermore, individuals who would like an organized sports experience and who are not already participating in that sport make ideal teammates.

Appropriate teammates can be identified and recruited from the following sources:

- community service clubs
- businesses and corporations
- church groups
- students who are not involved in organized sports
- recreational sports enthusiasts
- siblings.

Careful and thoughtful selection of teammates will lead to the most positive outcomes for everyone.

## RECRUITING ASSISTANT COACHES

Specific sport skill is helpful, but not mandatory, in an assistant coach. Family members, teachers, neighbors, and friends of Special Olympics athletes can be taught the basic skill progression and become excellent assistant coaches. Fraternal and civic organizations are good sources of volunteers as well as high school and college student service clubs or sports teams. Many of your coaches will come from within the sports community from the following groups:

- adult competitive club members
- former competitors
- parents of children who participate in the sport competitively
- professional coaches
- recreational center employees.

Make sure to plan a minimum of one orientation for those you recruit. Whenever possible, assistant coaches should also take the General Session and the Volunteer Coach certification course prior to the start of the season. It is also important to give them a copy of the Sports Skills Program Guide.

## RETAINING ATHLETES AND COACHES

Developing appropriate, meaningful, and high quality training and competition opportunities will increase a program's ability to recruit and retain athletes and coaches. To this end, the coach-to-athlete ratio has a major impact. It is just as important to provide 1-to-1 instruction to athletes with higher ability as it is to those with lower ability. Use of peer coaches to provide 1-to-1 training has been effective in improving skill levels and in fostering inclusion.

Having several assistant coaches allows the head coach to distribute responsibility and authority among the assistant coaches. The outcomes are lessening the load on any one person, giving each volunteer a very important and meaningful role, and ensuring a long term commitment by all.

Reports from field organizations indicate that a critical time in the retention of athletes is the period when they graduate from school into community work programs. Separation from friends and familiar programs often comes with transition. A coordinated effort among the Special Olympics program, family, and school is important to ensure that Special Olympics is a part of the athlete's transition plan. In that way, the athlete can make an appropriate and timely transition into community-based sports programs as well as continue a meaningful part of their life.

## CLOTHING

Since Ice Speed Skating can be done either on an outdoor or indoor ice surface, clothing required depends on temperature and weather conditions.

For practices and competitions held on outdoor ice surfaces, skaters should have the following available to wear:

- athletic briefs/compression shorts (male and female)
- sport bra (females)
- long underwear tops and bottoms
- polypro tight liner
- lycra tights
- polypro or silk socks
- turtleneck shirt/long-sleeved shirt
- sweatshirt
- warm-up pants
- loose-fitting jacket
- warm gloves
- hat
- helmet
- knee pads
- skate boot covers (for the serious skater).

Clothing should provide comfort from the elements, and worn in layers so the skater can remove or add articles as he/she warms up or if weather conditions change. Use a sunscreen when appropriate to protect exposed skin.

Skaters should change into practice clothing immediately before practice, especially their socks. Trapped moisture quickly becomes cold feet and bodies that can lead to frost bite or other cold injuries. If a skater complains of being cold, schedule a short warming break and then return to practice. It is better to extend practice time then to have a skater come in at the end of a practice with frozen fingers or toes.

Indoor ice facilities offer their own unique conditions and skaters should be prepared to layer clothing. In addition, water frequently accumulates on the ice surface during skating so skaters should pack additional clothing in case they get wet during a fall.

For practices and competitions held on indoor ice surfaces, the following clothing should be available:

- athletic briefs/compression shorts (male and female)
- sport bra (female)
- lycra tights
- polypro or silk socks
- turtleneck shirt/long-sleeved shirt
- light warm-up jacket
- gloves
- helmet
- knee pads
- shin guards (optional)
- one- or two-piece uniform (optional, if available).

Jeans, loose-fitting sweatpants, and short-sleeved shirts are NOT proper skating attire and a skater should not be allowed on the ice unless he or she is wearing the proper clothing.

## EQUIPMENT

All skaters should have the following equipment:
GLOVES - preferably leather or of a material that is fairly cut-resistant and water proof. Mittens get wet quickly and should not be used. Gloves are worn for both warmth and safety. NO SKATER SHOULD BE ALLOWED ON THE ICE UNLESS HE OR SHE IS WEARING GLOVES.

KNEE PADS - soccer type that fit correctly. Shin guards can be worn for additional protection. Knee pads should not be too tight so as to restrict knee movement or blood flow to the leg, but not so loose that they slip down during skating.

HELMETS - appropriate ice speed skating helmets should be used as identified by the National Governing Body. Helmets should be worn for both practice and competition. Hockey helmets may be used, but "cage fronts" should be removed as they restrict the skater's field of vision. Vent holes on all helmets should be small enough that a skate blade can not pass through them. Helmets should be securely fastened under the chin. Approved speed skating safety helmets cost about the same as hockey helmets and are available from Sporting Goods stores that sell skating equipment. When skating outdoors, wearing helmets may not be prudent due to weather conditions. Coaches should determine which skaters need helmets for safety and which do not. Coaches should also determine when a hat may be more appropriate. If practice and competition are done on an outdoor hockey rink with dasher boards, helmets MUST be worn regardless of the weather conditions.

## SKATES

Figure Skates - may be used by athletes learning how to skate, but are NOT appropriate for Ice Speed Skating training and competition. Hockey Skates - may be used by athletes learning how to skate and may be used for Ice Speed Skating training and competition for beginner and early intermediate level speed skating athletes.
Speed Skates - are the skates of choice for athletes learning to skate and for training and competition. Intermediate and advanced level skaters must wear speed skates in order to learn and use proper technique and skating skills as their performance improves. Improper skates can affect a skater's performance and also present a safety issue.
Whatever type of skate is used, all are fit the same. An athlete should only wear one (1) pair of socks when putting on skates. Skate boots are generally larger than conventional shoes, so a skater may wear a smaller skate than the shoes he or she normally wears. Skates should fit snugly, but not be tight in the toes.

Further, the skates should fit snugly at the heel with no room for the foot to shift or move back and forth when the skate is laced properly. Lacing the skate should be snug, but not so tight as to cause pain or restrict blood flow to the foot.

Double-bladed skates or clip-on skates are not appropriate for Ice Speed Skating training or competition.

The Special Olympics coach should have available the following equipment for conducting a practice or competition:

- 16 corner markers ( 7 for each corner and 2 extra)
- 8-10 twelve inch pylons for setting up practice slaloms, relay courses, etc.
- adequate safety matting to pad turns as outlined in the Special Olympics Speed Skating Rules
- extra helmets, gloves, and knee pads for skaters
- a whistle to call attention and gather skaters on the practice surface


## THE FACILITY

Practice and competition in Speed Skating may be done either on an outdoor or indoor ice surface. Certain considerations must be given dependent on what type of ice surface is used.

## OUTDOOR ICE SURFACE

If an outdoor ice surface is used, it should be large enough to place a 100 meter oval skating track (insert figure 1-Section II-F). The ice surface should be free of ruts, cracks, and debris. There should be no low-hanging branches or anything sticking out onto the ice surface that a skater may skate into. The ice surface should also be large enough to allow for adequate fall lines in the event a skater falls either on a straightaway or a corner turn.

If the outdoor ice surface is a hockey rink with dasher boards, safety mats must be present and all skaters must wear helmets and protective knee pads for practice and competition. Snow or bales of straw are NOT appropriate safety padding and should not be used in any situation. An alternate ice practice or competition surface must be found if safety padding is not present.

In areas with established community Speed Skating Clubs, larger outdoor oval skating tracks may be available for practice and some competition experiences. These larger track configurations may range from a 200 meter track to a 400 meter track. The Special Olympic coach should check with a representative of the community club about sharing ice time and find out the various skating distances that may be skated on the particular track. Advantages of the larger oval skating track are longer straight-aways for practicing technique and wider skating lanes allowing for more people to skate at any one time.

## INDOOR ICE SURFACE

Most indoor ice arenas offer regulation-sized hockey rinks that a 100 meter oval skating track can be set on. Since permanent dasher boards are present, approved safety mats must be used for both practice and competition. In areas with established community Speed Skating Clubs, an International Skating Union (ISU) regulation 111 meter track may be used. The Special Olympics coach should check with a representative of the community club about sharing ice time when appropriate, use of safety mats, and distances that can be skated on the 111 meter track. Helmets, long-sleeved shirts, gloves, and protective knee pads must be worn on an indoor hockey rink.

Some ice arenas offer what is referred to as a "studio" ice surface. This ice surface is relatively small and for no reason be used for Speed Skating practice or competition purposes. A studio rink is for skaters who are learning how to skate and learning basic ice skating skills. This is the only appropriate reason to use this surface; no racing should EVER be attempted on a studio rink.

## COACH'S SAFETY CHECKLIST

As one of the many duties of a coach, providing a safe practice environment is one of the most important. Along with the coach, each skater has a responsibility to the other skaters present to maintain a safe training and competition environment. Following are two safety checklists: one for the Speed Skating Coach and one for the Speed Skater.

## SAFETY CHECKLIST FOR THE SPEED SKATING COACH

## The Facility

No skaters are allowed on the ice surface until the coach or a responsible adult has checked the ice for safety.

The ice surface should be clean, free from debris, and with no objects hanging over the ice surface that may interfere with skating.

On an indoor ice rink all hockey box doors and doors on and off the ice are closed for practice. Safety mats are present.

There is easy access to changing areas, bathrooms, telephone, water to drink, and first aid equipment.

## Supervision

There are at least 2 responsible adults present, at least one of whom will be with the skaters at all times. Copies of medical releases should be on hand.

If training for competition, there should be a minimum of one coach and assistant coach on the ice for each 8 skaters.

The coach should instruct all skaters of the basic rules:

- Maintain one-way traffic
- Keep your hands to yourself
- Get up right away right after a fall
- Do what any other coach present asks
- Listen for the whistle and listen to all instructions.


## Equipment and Clothing

Skaters are wearing proper-fitting skates.
Skaters are wearing proper skating attire (helmet, long-sleeved shirt, knee pads, and gloves).
Skates are laced to the top and tied securely.
Skaters have learned the proper way to fall down and get back up.
Skaters have warmed up and completed stretching routine.
Skaters are informed of practice session goals and rules for the training session.

## SAFETY CHECKLIST FOR THE SPEED SKATER

Skater does warm up exercises and stretching routine.
Skater is wearing proper skating attire and brings all safety equipment to practice (helmet, knee pads, and gloves).

Skater removes all jewelry, pins, etc.
Skates fit properly and are laced and tied securely.
Skater will stay on mats and not step on cement or steel floors with skates.
Skater removes skateguards before stepping on the ice.
Skater gets up immediately after falling down.
Skater keeps hands to self.
Skater does not engage in horseplay, pushing, or shoving.
Skater skates in counterclockwise direction at all times.
Skater does not sit on ice or boards or kick out with skate blades.
Skater does not throw equipment, play with equipment on the ice, or throw skates when taking them off.
Skater listens to all coaches on the ice and in the warm-up area.

## DEVELOPING A SEASON PLAN

## BEFORE THE SEASON STARTS

Attend coaches training school.
Arrange for facility use.
_ Arrange for equipment needed.
_ Hold orientation for family members, teachers, and friends of athletes, including Home Training Program.

## WEEK ONE

Welcome athletes, orient them to the facility and routing.
Review safety procedures and rules.
_ Size and check equipment to be used, whether the athlete's own or rented equipment.
_ Warm up.
Stretch.
_ Teach basic skills.
_Assess the athlete's skill level.
$\qquad$ Cool down.

## WEEK TWO

$\qquad$ Review safety procedures and rules.
__ Warm up.
_Stretch.
_ Practice previously taught skills.
_ Teach new skills.
__ Provide a competitive experience.
Cool down.

## WEEK THREE

Warm up.
Stretch.
_ Practice previously taught skills.
Teach new skills.
__ Provide a competitive experience.
__ Cool down.

## WEEK FOUR

Warm up.
__Stretch.
__ Practice previously taught skills.
_ Teach new skills.
_ Provide a competitive experience.
$\qquad$ Cool down.
WEEK FIVE
$\qquad$ Warm up.
__ Stretch.
__ Practice previously taught skills.
Teach new skills.
__ Provide a competitive experience.
_ Cool down.

## WEEK SIX

Warm up.
_Stretch.
__ Practice previously taught skills.
$\qquad$ Teach new skills.
$\qquad$ Provide a competitive experience.
$\qquad$ Cool down.

## WEEK SEVEN

__ Give out mini meet or competition information (schedule, events, food, transportation, invitation to families).
_ Warm up.
__ Stretch.
__ Practice previously taught skills.
_ Provide a competitive experience.
__ Cool down.
___ Invite media to the event.

## WEEK EIGHT

Try on outfits or uniforms for the meet.
Warm up.
_ Stretch.
_ Provide a competitive experience.
__Cool down.

## COMPETITION

## Welcome guests, review schedule for meet.

$\qquad$ Warm up.
Stretch.
_ Compete.
_ Present awards.
__ Cool down.
__ Eat snack or meal.

## AFTER THE EIGHT WEEK SEASON

Continue training athletes going on to Area, State, or National events.
_ Thank the facility host.
___ Thank assistant coaches.
_ Thank other volunteers.
__ Send follow-up news story and photos to media.
_ Evaluate this season.
_ Develop the season plan for next year.

## SPEED SKATING REFERENCES

Alter, M.J. (1990). Sport Stretch. Champaign, IL: Leisure Press.
Amteur Speed Skating Union of the United State/ U.S.I.S.A. Instruction Manual - Novice Development Seminar. Glen Ellyn, IL: Amateur Speed Skating Union of the United States.

Anderson, B. (1980). Stretching. Bolinas, CA: Shelter Publications Inc.
Arnheim, D. D. (1985). Modern Principles of Athletic Training. St. Louis: Times Mirror/Mosby College Publishing.
Canadian Amateur Speed Skating Association (1978). Level 1 - Coaching Manual - Speed Skating. Canadian Amateur Speed Skating Association.

Canadian Amateur Speed Skating Association (1980) Level 2 - Technical Manual - Speed Skating. Canadian Amateur Speed Skating Association.

Department of the Army, U.S.A. (1985) Physical Fitness Training, FM 21-20. Washington, DC: U.S. Government Printing Office.

Griffith, H. W. (1986). Complete Guide to Sport Injuries. Los Angeles: Body Press.
Hatfield, F.C. (1989). Power - A Scientific Approach. Chicago: Contemporary Books Inc.
Hazeldine, R. (1985). Fitness for Sport. Marlborough, ENG: The Crowood Press.
Holum, Dianne. (1984). The Complete Handbook of Speed Skating. Lake Placid, NY: High Peaks Cyclery Press.
International Skating Union. (1994). Regulations 1994-1996. Davos, SWI.
Larson, L. A. (1976). Foundations of Physical Activity. New York: Macmillan Publishing Co., Inc.
Magill, R. A., Ash, M. J. \& Smoll, F. L. (1982). Children in Sport. Champaign, IL: Human Kinetics Publishers Inc.
Orlick, T. \& Botterill, C. (1975). Every Kid Can Win. Chicago: Nelson - Hall.
Partington, J. T., Orlick, T. \& Salmela, J. H. (1982). Sport in Perspective. Ottawa: The Coaching Association of Canada.
Pearl, B. \& Moran, G.T. (1986). Getting Stronger. Bolinas, CA: Shelter Publications Inc.
Radcliffe, J. C. \& Farentinos, R.C. (1985). Plyometrics - Explosive Power Training. Champaign, IL: Human Kinetics Publishers, Inc.
Simon, H. B. \& Levisohn, S.R. (1987). The Athlete Within - A Personal Guide to Total Fitness. Boston: Little Brown and Company.
Southmayd, W. \& Hoffman, M. (1981). Sports Health - The Complete Book of Athletic Injuries. New York: G.P. Putnam's Sons.

Warren, W.E. (1988). Coaching and Winning. Englewood Cliffs, NJ: Prentice Hall.
Weider, J. \& Reynolds, B. (1989). Ultimate Bodybuilding. Chicago: Contemporary Books Inc.

## PLANNING A TRAINING SESSION

Each training session should contain the same elements. The amount of time spent in each area will depend on the goal of the training session, the time of season the session is in, and the amount of time available for a particular session. The following elements should be addressed:

- Warm-up
- Stretches
- Previously learned skills
- New skills
- Competition experiences
- Fun activities incorporating learned skills
- Fitness training if time allows
- Cool-down
- Feedback to athletes on performance during session.

Fitness and conditioning exercises are a valuable part of the skater's total training program, but may not fit into the limited on-ice schedule or facility you are practicing in. As the Speed Skating Coach, you may suggest either additional weekly training sessions or the use of home training programs for your skaters. If a skater attends a school program with regular Physical Education classes, a discussion with the instructor may prove helpful in getting the additional supervised fitness and conditioning training needed. Adult skaters may be able to get their additional fitness and conditioning training through local health and fitness centers. Your suggestions to the training personnel at these establishments can offer your skaters a well-rounded program.

A sample 90-minute training session a group of speed skaters might look like the following:
(insert SPECIAL OLYMPICS SPEED SKATING TRAINING SESSION)
(insert blank SPECIAL OLYMPICS SPEED SKATING TRAINING SESSION)

## WARMING UP

Warm-up prior to exercise is very important. It raises body temperature thus preparing the muscles, nervous system, tendons, ligaments, and the cardiovascular system for upcoming stretches and exercises. The chance of injury is reduced by increasing muscle elasticity.

There are three types of warm-up:

1. PASSIVE - increases body temperature by external means such as massage, heating pads, steam baths or hot showers. Individuals with significant physical limitations may benefit from passive warm-up both before and between training sessions.
2. GENERAL - increases overall body temperature through movement of major muscle groups that may or may not be associated with the exercise that is about to be performed. Appropriate general warm-up activities include 3-5 minutes of jogging, running in place, jumping rope, dancing (aerobic type) to fast music, or riding a stationary bike or cycling.
3. SPECIFIC - concentrates on the positions of the body to be used in upcoming exercises and mimics the event. Examples of this would be "dry" skating, performing arm swings, doing Range of Motion and Flexibility exercises that mimic skating, and balancing exercises. Specific warm-up exercises can be done both off-ice and on-ice depending on the skill level of the speed skater. If specific warm-up is done on the ice, the skater should do a general warm-up prior to stretching and putting on skates.

## STRETCHING

Stretching prevents injury by increasing the range of motion of joints and the muscles associated with that joint. Stretches that follow are STATIC stretches; each is held for $10-30$ seconds in an easy stretch just to the point of tension. When doing stretches the speed skater should never bounce or push/pull to the point of pain.

Prior to skating a speed skater should do a stretch for each major muscle group. If time is available at the end of the session stretching should be done as part of the cool-down process.

Following are common stretches used by speed skaters:

## ARMS/SHOULDERS/RIBS

- With arms extended overhead and palms together, stretch upward and hold.


## ARMS/SHOULDERS/UPPER BACK

- Interlace fingers above head.
- With palms facing upward, push arms slightly back and up.
- Hold stretch.
- Do not hold breath.

WAIST

- Stand with feet about shoulder-width apart and toes pointed straight ahead.
- Keep knees slightly bent, place one hand on hip for support while extending the other arm up and over head.
- Slowly bend at waist to the side, toward the hand on hip.
- Move slowly for good stretch.
- No quick or jerky movements during the stretch.


## LEGS/BACK/FEET

- Lie down with back to floor.
- Pull right leg toward chest.
- Keep back of head on the floor, but don't strain.
- Hold as an easy stretch.
- Repeat, pulling left leg toward chest.
- Be sure that lower back is flat.


## GROIN

- Sit on floor.
- Put soles of feet together and hold onto toes.
- Gently pull self forward, bending from the hips until a good stretch is felt in the groin area (a stretch may also be felt in the back).
- Make sure that the initial movement for the stretch is not from the head and shoulders.
- Try to keep elbows on the outside of the legs so the stretch position has stability and balance.


## UPPER LEGS/HIPS

- Sit with feet a comfortable distance apart.
- Slowly lean forward from the hips.
- Be sure to keep thighs (quadriceps) relaxed and feet upright.
- Keep hands out in front for balance and stability (may also hold onto something for greater control).


## ANKLE/QUADRICEPS

- Lie on left side and rest side of head in the palm of left hand.
- Hold the top of right foot with right hand between the toes and ankle.
- Gently pull the right heel toward the right buttock.
- Hold for an easy stretch.
- Repeat with left leg.
- Never stretch the knee to the point of pain - always be in control.


## GROIN/HAMSTRINGS/HIP

- Kneel on the ground.
- Put hands in front of you for balance and stability.
- Put right knee directly above the right ankle.
- Extend the left leg straight back coming up on the toes and ball of foot, shifting your weight onto this foot.
- Hold for an easy stretch.
- Repeat on right leg.


## LOWER BACK/SIDE OF HIP

- Sit with right leg straight.
- Bend left leg, cross left foot over and rest it to the outside of the right knee.
- Bend right elbow and rest it on the outside of the upper left thigh, just above the knee.
- During the stretch use the right elbow to keep the left leg stationary with controlled pressure to the inside.
- With left hand resting behind you, slowly turn head to look over left shoulder, and at the same time rotate upper body toward left hand and arm.
- As you turn your upper body, think of turning your hips in the same direction (your hips won't move because the right elbow is keeping the left leg stationary).
- Repeat on right side.
- Do not hold breath, breathe easily.


## CALVES

- Stand a little away from a wall or other solid support.
- Lean on the wall with your forearms, head resting on hands.
- Bend right leg and place foot on the ground in front of you, with left leg straight behind.
- Slowly move hips forward, keeping lower back flat.
- Be sure to keep the heel of the straight leg on the ground, with toes pointed straight ahead.
- Hold for an easy stretch.
- Do not bounce.
- Repeat on other leg.


## ELONGATION/GENERAL RELAXATION

- Extend arms overhead and straighten out legs.
- Stretch as far as is comfortable in opposite direction with arms and legs.
- Stretch, then relax for same amount of time.


## GROIN

- Relax, with knees bent and soles of feet together.
- This should be a comfortable position.
- Let the pull of gravity do the stretching.
from Stretching by Bill Anderson, Shelter Publications
(insert illustrations for each stretch)


## ASSESSMENT OF EACH ATHLETE'S CURRENT SKILL LEVEL

At the beginning of each training season and at regular intervals, each speed skater should be assessed to determine skills mastered and identify those that require further work.

Following is a Speed Skating Performance Assessment Form that includes basic ice skating skills needed to begin speed skating training as well as specific speed skating skills needed to progress in the sport.

## INDIVIDUAL SPEED SKATER SKILL ASSESSMENT FORM

Skater: $\qquad$ Date:
Coach: $\qquad$
BASIC ICE SKATING SKILLS

| SKILL LEVEL A |  |
| :--- | :--- |
| Yes | No |
| - | - |
| - | Stand unassisted for 5 seconds. <br> Fall and stand up - unassisted. <br> Perform Knee Dip standing still - unassisted. |
| - | - |
| - | - |
| March forward 10 steps - unassisted. |  |

## SKILL LEVEL B

\(\left.$$
\begin{array}{ll}- & -\quad\end{array}
$$ \begin{array}{l}March forward 10 steps - unassisted. <br>
Perform Swizzles (fish tails) standing still for 3 repetitions. <br>

Perform backward Wiggle or March - assisted.\end{array}\right] \quad\)| Perform 2-foot Glide forward for distance of at least length of body. |
| :--- |

## SKILL LEVEL C

_ - Perform backward Wiggle or March (3 repetitions).

-     - Perform 5 forward Swizzles covering at least 10 feet.
-     -         - Perform forward Skating across the rink.
__ -_ Perform forward Gliding Dip covering at least length of body.


## SKILL LEVEL D

__ Perform backward 2-foot Glide covering at least length of body.

-     -         - Perform 2-foot Jump in place.
-     -         - Perform 1-foot Snowplow Stop (left or right).
-_ - Perform forward 1-foot Glide covering at least length of body (right and left).

SKILL LEVEL E
$\qquad$ Perform forward Stroking across the rink.

-     - 

Perform 5 backward Swizzles covering at least 10 feet.
_ - Perform forward 2-foot Curves left and right across the rink.

-     -         - Perform 2-foot Turn front to back, on the spot.


## SPEED SKATING SKILLS

BASIC POSITION

Yes $\quad$| Ankles are straight, not leaning in or out. |
| :--- |
| Skates are shoulder-width apart. |
| Blades are parallel and point straight forward. |
| Knees are over toes. |
| Legs are bent about 90 degrees. |
| Elbows are on knees with hands clasped. |
| Back is bent in a relaxed position about 45 degrees. |
| Center of gravity is at middle of blade. |
| Eyes and head are straight ahead looking at point 10 feet in front. |

| ARM SWING |  |  |
| :--- | :--- | :--- |
| - | - | Swing arms straight back and forth "thumbs up." <br> Swing arms no higher than shoulder, front or back. |
| $-\quad-\quad$ | Hands and arms are relaxed but controlled. <br> Arms have slight bend in elbow on front swing. |  |

## LEG RETURN

|  | Push directly to side. |
| :---: | :---: |
|  | Leg is relaxed and swings behind. |
|  | Leg is returned to starting position |
|  | Knees and feet are close together. |
|  | Heel of blade is placed down first. |

## CROSSING OVER

| Feet are kept close to ice. |
| :--- |
| Right skate is placed in direction of travel over left skate. |
| Push to side - not back with left skate. |
| Left skate is returned to start position. |
| Weight is on outside edge of left skate. |
| Weight is on inside edge of right skate. |
| Head, eyes, and shoulders follow the line of the turn. |$\quad=\quad-\quad=\quad$| $-\quad-\quad$ |
| :--- |

## STARTS



Skater demonstrates response to start sequence commands.
Skates are parallel, at about 45 degrees to starting line.
Feet are shoulder-width apart.
Knees are bent at 90 degrees.
Lead arm is held comfortably in front with elbow bent. Trailing arm is slightly behind ready to swing forward.
Back is straight for first 3 steps.
Elbows are bent for first 3 steps.
Weight is evenly distributed with slightly more on rear foot providing good support and balance.
Eyes and head are up looking straight ahead down the track.
Skater uses alternating running steps for at least first three steps.
Skater gradually goes down into basic position as speed increases and tempo decreases.
Arm swing lengthens as stride lengthens.

## STEPS TO TEACHING EACH SKILL

In order for a skater to be successful in speed skating, one must learn and master certain basic skating skills. Following are basic ice skating skills that all skaters should know how to do in both Figure Skating and Speed Skating. When a skater has learned at least $80 \%$ of these basic ice skating skills, he/she is ready to begin training in skating the speed skating track and move to some early competition experiences. The Speed Skating coach must take care to ensure that each skater learns basic ice skating skills rather than rushing a skater into competition without the requisite skills.

Skating and learning how to skate should be first and foremost FUN. Learning these basic skills is important for future skill progression and success.

## SKILL LEVEL A

## Basic Skill 1- <br> STAND UNASSISTED FOR FIVE SECONDS

Assessing the athlete's readiness
__ The athlete can walk in skates on carpet or tile floor.
While on carpet or tile floor, the athlete can keep feet parallel and maintain balance over center of skate.
The athlete can keep head erect and eyes focused forward.
Teaching the skill

- Walk onto ice.
- Position shoulders directly over the hips.
- Keep feet parallel, maintaining center of balance directly over center of skate.
- Hold arms to the side and slightly forward for balance.
- Keep head erect and eyes focused forward.
- Bend knees and hold ankles straight.


## Basic Skill 2-

FALL AND STAND UP UNASSISTED
Assessing the athlete's readiness
On carpet or tile floor, the athlete can stand up from a kneeling position without assistance.
Teaching the skill

- Assume a standing position, hands and arms stretched forward.
- Tuck chin in to keep head forward.
- Bend knees and continue into dip position lowering hips to ice.
- Continue fall until skater falls on one cheek (bottom) keeping hands in position and off ice.
- Assume position on hands and knees with hands flat on ice.
- Bring one knee up towards chest, firmly setting blade flat on the ice.
- Raise body up high enough to bring other skate next to the first skate.
- Keep body in crouch position, maintaining balance.
- Raise up slowly, straightening the knees and keeping balance over the skate.
- Assume the standing position.


## Suggestions for the teacher/coach

Stress the importance of sitting down or rolling to the side when falling. Bring hands towards chest to break the fall, except when necessary to prevent serious injuries to the head or face. Instruct athletes to get onto their hands and knees before standing. Help athlete overcome the fear of ice and the phenomena of sliding and slipping by taking him/her on the ice in street shoes with rubber soles. Have athlete practice standing up maneuvers on dry land first. Practice knee bends while gliding forward on both skates. Be sure the blades stay flat on the ice throughout this exercise. This exercise will improve the athlete's recovery skills.

## Basic Skill 3-

## KNEE DIP STANDING STILL UNASSISTED

Assessing the athlete's readiness
On carpet or tile floor, the athlete can perform a knee dip.
Teaching the skill

- Assume a standing position on the ice.
- Extend arms forward.
- Bend knees to lower hips until hips are slightly higher than the knees.
- Keep back straight, but angled forward at hip to maintain balance.


## Suggestions for the teacher/coach

Keep blades flat to ice, feet parallel. Instruct athlete to let ankles press forward over toes. Instruct athlete to reach forward with extended arms. Stress squat position, and straight back.

## Basic Skill 4-

## MARCH FORWARD 10 STEPS ASSISTED

Assessing the athlete's readiness
While wearing skates, the athlete can march forward 10 steps on carpet or tile floor with or without assistance.

## Teaching the skill

- Assume a standing position on the ice.
- Maintain center of balance directly over skates.
- Stand with skates in a parallel position.
- March in standing position with toes slightly turned out; march forward 10 steps.
- Let the skate down with the blade flat on the ice.
- March forward with the other skate in the same manner.
- Repeat sequence several times until a smooth marching motion is achieved.


## Suggestions for the teacher/coach

Stand with athlete and help athlete adjust to the ice surface. If skate aid is necessary, instruct athlete to stand erect and walk on the ice while pushing it ahead. When supporting the athlete, stand at the athlete's side, use your stronger arm to hold the underarm of the athlete, and grip his/her hand with your hand. Your other arm remains free for balance. If "weak ankles" are spotted, check for the following: skates too large, skates too loose, improperly-fitted skates, unsturdy boot, no arch support or worn out boot material, and blade mounting. Hold both of the athlete's hands in a waist-high position. Instruct athlete to march forward while you walk backward. Instruct athlete to exaggerate the marching motion. Ask the athlete to "march" as in a parade or as a soldier. Offer support only when needed (grip athlete's arm only if he/she is losing balance). It is important for the coach and volunteer to know that it is dangerous to assist a skater by holding him/her from behind. The possibility of injury caused by the athlete's skate blades, or the lack of control in this position is great.

## SKILL LEVEL B

## Basic Skill 5-

MARCH FORWARD 10 STEPS UNASSISTED
Assessing the athlete's readiness
While wearing skates, the athlete can march forward 10 steps on carpet or tile floor without assistance.

## Teaching the skill

- Assume a standing position on the ice.
- Maintain center of balance directly over skates.
- Stand with skates in a parallel position.
- March in standing position with toes slightly turned out, march forward 10 steps.
- Let the skate down with the blade flat on the ice.
- March forward with the other skate in the same manner.
- Repeat sequence several times until a smooth marching motion is achieved.


## Basic Skill 6-

## SWIZZLES STANDING STILL (3 REPETITIONS)

Assessing the athlete's readiness
While wearing skates, the athlete can point toes outward and then point toes inward while on carpet or tile floor.

## Teaching the skill

- Assume a standing position.
- Position feet parallel to each other.
- Point toes outward and position the blades on ice flat.
- Point toes inward with blade flat on ice.
- Repeat this sequence several times.


## Suggestions for the teacher/coach

Demonstrate and explain that the blades never leave the ice during this skill.

## Basic Skill 7-

## BACKWARD WIGGLE OR MARCH ASSISTED

Assessing the athlete's readiness
While wearing skates, the athlete can walk backward 10 steps with or without assistance.
Teaching the skill

- Assume standing position.
- Place blades flat on ice with toes slightly pointed inward.
- Lift feet as in marching motion with weight on ball of foot.
- Skate backward by twisting back and forth in "wiggling" motion.
- Keep head up and facing forward, knees slightly bent, and arms out for balance.
- Keep the body facing forward at all times. Move only the hips, legs, and feet underneath the upper body.


## Suggestions for the teacher/coach

Stress picking up knees for marching and correct posture while moving backward.

## Basic Skill 8-

FORWARD TWO-FOOT GLIDE LENGTH OF BODY
Assessing the athlete's readiness
The athlete can perform Basic Skills 1-7.
Teaching the skill

- Assume a standing position.
- Skate forward taking small steps with toes pointed out.
- Glide forward on both feet parallel to each other, head up and facing forward.
- Knees bent slightly, and arms extended to the side and slightly forward.
- Glide for length of body.


## Suggestions for the teacher/coach

Assist athlete from the side by holding the arm and hand. Assist from front of the athlete only in extreme cases of difficulty. Use a skate aid to let athlete practice by himself. Increase the length of steps and thus the speed of the glide, as competency increases.

## SKILL LEVEL C

## Basic Skill 9-

## BACKWARD WIGGLE OR MARCH UNASSISTED

Assessing the athlete's readiness
The athlete can perform Basic Skills 1-8.
Teaching the skill

- Assume standing position.
- Place blades flat on ice with toes slightly pointed inward.
- Lift feet as in marching motion with weight on ball of foot.
- Skate backward by twisting back and forth in "wiggling" motion.
- Keep head up and facing forward, knees slightly bent, and arms out for balance.
- Keep the body facing forward at all times. Move only the hips, legs, and feet underneath the upper body.


## Suggestions for the teacher/coach

Stress picking up knees for marching and correct posture while moving backward.

## Basic Skill 10-

FIVE FORWARD SWIZZLES COVERING AT LEAST 10 FEET
Assessing the athlete's readiness
The athlete can perform Basic Skills 1-9.

## Teaching the skill

- Assume standing position.
- Position feet parallel to each other.
- Bend knees to create more pressure and more glide.
- Keep upper body straight and arms extended to the side and slightly forward.
- Let feet glide forward in an outward direction until slightly more than hip-width apart.
- Turn feet slightly toward each other pulling feet together and straighten knees, lifting the upper body.
- Focus eyes in direction of travel.
- Repeat sequence for at least 10 feet.


## Suggestions for the teacher/coach

Demonstrate and explain that the blades never leave the ice during this skill. Instruct the athlete to use knee action (down, up, down) to increase forward motion. Stress correct posture while performing skill.

## Basic Skill 11- <br> FORWARD SKATING ACROSS WIDTH OF RINK

Assessing the athlete's readiness
__ The athlete can perform Basic Skills 1-10.
Teaching the skill

- Assume a standing position.
- Begin marching with toes pointed outward and both knees bent.
- Arms extended to the side and slightly forward.
- Balance weight on both skates evenly.
- Continue across rink.
- Instruct skaters to shift weight from one skate to the other.
- Instruct skaters to shift weight from one skate to the other.
- Focus indirection of travel.


## Suggestions to the teacher/coach

Instruct athlete to maintain correct posture while moving forward. When pushing, use the inside of the blade to begin the thrust (push).

## Basic Skill 12- <br> FORWARD GLIDING DIP LENGTH OF BODY

Assessing the athlete's readiness
__ The athlete can perform Basic Skills 1-11.
Teaching the skill

- Assume skating position.
- Begin skating forward with skates parallel to ice.
- Glide on 2 feet, head up and facing forward.
- Bend knees to lower hips until slightly higher than the knees while gliding forward.
- Resume standing position while gliding forward.


## Suggestions for the teacher/coach

Instruct athlete to keep blades flat on ice. Stress bending forward of ankles in dip position. Instruct athlete to reach forward extending arms. Stress "squat" position with straight back.

## SKILL LEVEL $D$

## Basic Skill 13-

## BACKWARD TWO-FOOT GLIDE LENGTH OF BODY

Assessing the athlete's readiness
The athlete can perform Basic Skills 1-12.

## Teaching the skill

- Assume standing position with back facing direction of travel.
- Skate backwards with feet parallel to each other, head up and facing forward.
- Knees bent slightly and arms extended forward.
- Balance with weight on ball of foot.
- Glide for length of body.


## Suggestions for the teacher/coach

Skater should bend knees and allow blades to glide backwards. Instruct athlete to keep head erect and arms extended forward.

## Basic Skill 14- <br> TWO-FOOT JUMP IN PLACE

Assessing the athlete's readiness
__ While wearing skates, the athlete can perform a two-footed jump on carpet or tile floor.
The athlete can perform Basic Skills 1-13.

## Teaching the skill

- Assume a standing position with arms extended forward.
- Bend knees and jump up.
- Land on bent knees on ball of foot.


## Suggestions for the teacher/coach

Instruct athlete to keep head erect and weight on ball of foot. Stress bend of knees for more height in jump.

## Basic Skill 15- <br> ONE-FOOT SNOWPLOW STOP (LEFT OR RIGHT)

Assessing the athlete's readiness
While wearing skates, the athlete can point toes together while standing
Teaching the skill

- Assume standing position on ice.
- Skate forward.
- Glide on both skates.
- Slide foot of skaters choice slightly forward and to the side, with toe turned in, and apply pressure to the inside edge of blade.
- Come to a gradual stop.
- Perform the maneuver in a straight line.
- Keep arms out for balance.
- Keep head up and arms extended to the side and slightly forward.


## Suggestions for the teacher/coach

Demonstrate the one-foot snowplow stop standing still. Emphasize "skidding" action with one foot on ice.

## Basic Skill 16- <br> FORWARD ONE-FOOT GLIDE LENGTH OF BODY

## Assessing the athlete's readiness

While wearing skates, the athlete can maintain balance on one foot (right or left) on carpet or tile floor without assistance.
__ The athlete can perform Basic Skills 1-15.

## Teaching the skill

- Assume standing position.
- Skate forward taking small steps.
- Glide forward on both skates.
- Balance weight on one skate.
- Lift other skate to ankle of skating foot.
- Hold body upright, head up, and facing forward, and arms to the side and slightly forward.
- Glide length of body.
- Repeat task sequence on opposite foot.


## Suggestions for the teacher/coach

Practice balancing on one skate by holding onto the rink boards. Keep free leg close to skating leg. Ask the athlete to keep a straight line while gliding forward on one skate. This will take plenty of practice. As competency increases, increase the length of the steps, and thus the speed of the glide.

## Basic Skill 17-

## FORWARD STROKING ACROSS RINK

Assessing the athlete's readiness
The athlete can perform Basic Skill 1-16.
Teaching the skill

- Assume a well-balanced standing position.
- Maintain center of balance directly over center of skates.
- Stand on both feet with toes turned outward about 60 degrees.
- Bend knees slightly.
- Push must be made with the inside edge of each foot without using the toe pick. Weight of body should be transferred evenly from one foot to the other with each push.
- Extend arms to the side and slightly forward for balance.
- Keep head erect and eyes focused in direction of travel.
- Take at least four alternating strokes without interruption.


## Suggestions for the teacher/coach

Instruct athlete to skate with upper body erect while holding arms extended forward and slightly to the side. If athlete is tripping over toe pick, check position of feet, distribution of weight, or size of skates. If skate slides away to the side while skating, check for dull blades or feet being too far apart.

## Basic Skill 18-

## FIVE BACKWARD SWIZZLES COVERING 10 FEET

Assessing the athlete's readiness
The athlete can perform Basic Skills 1-17.

## Teaching the skill

- Assume standing position with back facing direction of travel.
- Turn toes in slightly and heels apart, positioning blades on the inside edges.
- Bend knees to create pressure to move backwards.
- Keep upper body straight and arms extended to the side and slightly forward.
- Let the feet glide backward in an outward direction until hip-width apart; turn heels inward and pull feet together while lifting upper body.


## Suggestions for the teacher/coach

Diagram swizzle patterns on ice or blackboard. Have athlete follow swizzle track on ice. Emphasize the down-up motion.

## Basic Skill 19-

FORWARD TWO-FOOT CURVES, ACROSS RINK (LEFT AND RIGHT)
Assessing the athlete's readiness
The athlete can perform Basic Skills 1-18.
Teaching the skill

- Assume standing position.
- Begin skating forward and assume 2-foot glide position.
- To initiate curve in either direction, turn upper body in direction of curve desired.
- Keep arms extended to the side and slightly forward and knees bent.


## Suggestions for the teacher/coach

Have athlete follow lines which are drawn on ice or a course through cones. Emphasize lean of body into curve.

## Basic Skill 20-

TWO-FOOT TURN FRONT TO BACK, ON THE SPOT
Assessing the athlete's readiness
__ The athlete can perform Basic Skills 1-19.
Teaching the skill

- Assume standing position, feet parallel.
- Rotate upper body 90 degrees in direction of turn.
- Allow hips to twist 180 degrees in same direction as upper body.


## Suggestions for the teacher/coach

Instruct athlete to hold boards or rail and practice the movement of twisting upper body against hips. Stress knee bend.

## DRILLS

## Straightaway Relay

Number of players: 4-6 teams of 4-8 athletes
Equipment: Enough cones for number of teams
Line up teams as shown in diagram.
The first skater skates to the end, turns left around the cone and back to the team, then tags the next skater with the right hand and passes to the left.
This drill is excellent for teaching starting and straighaway skills.
Track Relay
Number of players: up to 24
Line up teams at their respective start lines as shown in diagram.
First skater skates one lap and then tags the next skater.

## STARTING

Assessing athlete's readiness
___Athlete demonstrates basic skills 1-20
Teaching the Skill
Basic Start Position (at start line):
*Teach current starting rules: Go to the Start; Ready---
*Skates are kept parallel to each other
*Feet placed about shoulder width apart
*Athlete stands with skate at 45 degree angle to start line
*Weight is distributed evenly on both skates, or slightly more weight on rear skate
*Knees are bent at 90 degrees
*Leading arm is in front of chest with elbow bent
*Trailing arm held loosely on side with elbow bent
*Back bent about 45 degrees
*Head and eyes looking up, focus on first turn marker
Moving From Start Position from Pistol Shot (Right Handed Start):

## 1. First Step:

- *Athlete raises left foot up and over start line and places in opposite direction at 45 degree position
- *Right arm swings powerfully forward with elbow bent
- *Left arm swings back slightly with elbow bent
- *Push off inner edge of right skate


## 2. Second Step:

- *Right arm swings back with slight elbow bent
- *Left arm swings powerfully forward with elbow bent
- *Push off inner edge of left skate
- *Right skate placed in front of, and to the side of the left skate-on inner edge at 45 degree position


## 3. Third Step:

- *Right arm swings powerfully forward with elbow bent
- *Left arm swings back with slight elbow bend
- *Push off inner edge of right skate
- *Left skate is placed in front of, and to the side of the right skate on inner edge at 45 degree position

Body Position

- *Back is fairly straight for first three steps
- $\quad$ Legs are bent at about 90 degree position
- *Back gradually assumes posture of about 45 degrees as tempo of step decreases, but speed of glide increases
- *Elbows remain bent for first 3-5 steps
- *Arm swing lengthens as stride lengthens
- $\quad$ Legs begin to push to side as glide increases


## Suggestions for the teacher/coach

ON-ICE: Stress correct foot position at start. Skates should be parallel to one another and at 45 degree angle to start line. This allows for good balance and a better position to push off the back skate. Feet should be a comfortable distance apart to provide a steady, comfortable base. Knees should be bent to get spring from the legs during the first three steps. Break down the start into each step. Have the skater practice stepping off the line and taking just the first step, then two steps, then three steps, then 5 steps. Start slow and increase the speed of the steps. Make sure arm swing is consistent with the steps. Do practice starts to both whistle and pistol. Give skater the experience of reacting to the pistol before competition. Practice time is also a great time to work with those skaters who appear afraid of the pistol shoot an opportunity to see the unloaded pistol close up. You as the coach should show the skater how the pistol works, what the blank shell looks like and explain safety issues with the regards to the pistol. Pistol starts should only be done by a coach or a responsible adult who is familiar with gun safety issues. Always use the correct start commands. Skill mastery at a slow speed will help for better skill use at a faster speed. Relay drills that reinforce skill development are: shuttle relay, track relay, line relay, starting shuttle relay, and change clothes relay.

OFF-ICE: The following items from the Speed Skating Home Training Programs will help further develop skills for better starts.
Flexibility/Range of Motion Home Training Program: Exercises 2,3,4,5,6,7,9,10,11,12, and 13.
Balance Drills Home Training Program: Exercises 2,3,4,5,6,7,8, and 9.
Skating Imitation Drills Home Training Program: Exercises 3,4,5,8,9, and 10.
Plyometric Drills Home Training Program: Exercises 1,2,3,4,5,6,7,8,9, and 10.

## PUTTING IT ALL TOGETHER

The most basic element in the sport of speed skating is the effective sequencing of basic position skills, push to the side skills, arm swing skills, leg return skills, crossing over skills and starting skills. This effective sequencing is accomplished by repetition of each skill and/or a combination of skills until they become almost automatic. When in their skates speed skaters sequence skills for gliding as automatically as they do when wearing shoes and walking. Repetition, repetition; at times slow, and at other times fast. Over and over and over. One could get bored if the coach/teacher is not creative in having the skater understand the skating task at hand, exploring different ways in which the skills can be learned, providing meaningful and fun practice opportunities and providing opportunity for the skater to demonstrate the skill at an automatic level (competition). Their is much more to teach and much more to learn than can usually
be accomplished in a usually much too short training session. Planning a monthly training schedule is a method for the teacher/coach to put training ideas on paper and allows these ideas to be shared with other coaches, parents and the athlete. Figure A is a sample of an in-season On-Ice/Home Training Schedule. This schedule is a further delineation of the training season plan the teacher/coach will have constructed to form the speed skating training program around. Each coach's training schedule will be different and will reflect time available for both on-ice and off-ice training experiences. Figures B, C and D reflect more intense training programs that include both summer dry-land training as well as more intense in-season training schedules for both On-Ice and Off-Ice training.

Training in speed skating must also include consideration of improving the work capacity of the skaters body for better performance at longer race distances (Figure E). This will involve not only skating skills but also strength training, interval training and endurance training designed to get the cardiovascular system, the respiratory system, the muscular system and the skater's mental attitude to work harder during training situations and thus be more efficient and stronger for competition situations.

It becomes very important for the teacher/coach consider the training effect needed to prepare a skater for competition. The training needed to prepare a skater for a 1000 Meter event is much different the program needed to prepare a skater for a 100 Meter event.

To systematize training more effectively the teacher/coach should consider training effective groupings that will best prepare the skater for competition. As a skater's skills progress he/she should be challenged further, this can be done by increasing the distances he/she will compete in but can also include setting individual goals based on improving times or some aspect of skating techniques. Using training effective groupings will also allow the teacher/coach to provide the appropriate amount of endurance and interval training necessary to prepare the skater for the more challenging distances.

Training Effective Groupings for Speed Skating in Special Olympics include:
25M Straight-away, 50M Half Lap events: For very challenged skaters, new skaters, skaters with an average 100 M lap time of greater than 50 seconds.
$100 \mathrm{M}, 300 \mathrm{M}, 500 \mathrm{M}$ events: For skaters with an average 100M lap time of 32-50 seconds.
300M, 500M, 800 M events: For skaters with an average 100 M lap time of $25-31$ seconds.
$500 \mathrm{M}, 800 \mathrm{M}, 1000 \mathrm{M}$ events: For skaters with an average 100M lap time of $19-24$ seconds.
800M, 1000M, 1500M events: For skaters with an average 100M lap time of $16-18$ seconds.
$500 \mathrm{M}, 1000 \mathrm{M}, 1500 \mathrm{M}$ events: For skaters with an average 100 M lap time of less than 16 seconds.

## ICE EXPERIENCES FOR THE VERY CHALLENGED ATHLETE

Participation in Special Olympics Speed Skating may not benefit the athlete with significant motor difficulties or other conditions/behaviors them meaningful training. Yet exposure to ice to develop awareness of the safety around ice may be of great benefit.

The following brief program outline is presented to give these athletes a meaningful experience involving ice.

Materials Needed:
One (1) hour of ice time on hockey rink.
Skate Aides or Rubbermaid 80 gallon garbage cans (upside down).
Speed Skates or other skates that will fit over athletes' hands.
One (1) skater to serve as demonstrator.
One (1) container or water and one (1) cup for each athlete participating. One (1) ice cube for each athlete participating.
One (1) metal fork for each athlete participating.
Warm clothing and gloves for each athlete participating.
Prior to the program meet with the rink manager and describe the purpose of your program and what you will be doing on the ice. Be sure to inform him that coaches and athletes will be on the ice wearing street shoes.

## OFF-ICE PROGRAM

1. Meet athletes in warming area. If possible have Rink Manager greet group and provide tour of facility. Include in tour: admission area, skate rental area, locker rooms, bathrooms, ice arena, Zamboni area, training room, and any other areas of interest. If available each athlete should be given a brochure that describes the facility. This can be used for discussion at home and after the program.
2. While in warming area talk to athletes about ice skating, the different types (speed skating, figure skating and hockey) and the history of skating ( see appendix for history of speed skating).
3. While in warming area talk about what ice is:
A. Give each athlete small cup of water. Ice $=$ water + cold temperature .
B. Give each athlete one ice cube. Allow athlete to touch ice cube to feel coldsensation. Demonstrate using metal fork how friction (moving tongs of fork quickly across flat surface of ice cube) creates heat making the ice cube melt. Show the ridges the fork tongs create as the ice is melted. Allow each athlete to try to get the ice cube they have to melt using the metal fork.
C. Discuss with athlete that the melting ice lubricates the surface of the ice cube making it slippery and turning the ice cube back into water. (Friction + Increased movement $=$ Heat; Ice + Heat $=$ Water).
D. At very end of session allow athlete to place ice cube in mouth to experience cold sensation.

## ON-ICE PROGRAM

1. Before stepping onto the ice, make sure each athlete has gloves and other suitable warm clothing on.
2. Have athletes enter ice through rink door. Instruct athletes to hold onto the side walls and shuffle their feet while they walk along the wall. Instruct athletes to keep knees slightly bent to help with balance. Provide assistance to those athletes who may not have necessary motor skills to do task.
3. When all athletes are on the ice, instruct them to push their feet forward and backward while holding onto the wall, Discuss with the athletes how the movement of their feet backward and forward are creating friction and heat and melt the ice.
4. Assist all athletes down onto the ice. Give each athlete a pair of ice skates to fit over their hands. While kneeling on the ice, have athletes move hands backward and forward with skate blades on the ice. If possible have athletes take gloves off after this task to feel the grooves the blade have made in the ice. Discuss how these grooves are similar to those created by moving the fork across the ice cube.
5. Demonstrate how to safely get to a standing position on the ice. First to both knees, then to one knee and up. Assist those athletes who need assistance to get to a standing position.
6. Have athletes return to a position next to the dasher boards. If possible have an experience skater demonstrate the basic skating skills listed in this sport skill guide and possibly demonstrate other more advanced skills.
7. Have athletes exit ice safely. Discuss with athletes how ice on sidewalks and streets are similar to that ice they were just on. Discuss with athletes the safety measures needed to walk on icy surfaces.
8. Return all equipment, If time permits and a snack area is available treat each athlete to a warm drink.

## IMPROVING ATHLETE PERFORMANCE

## A. SECTION IV-IMPROVING ATHLETE PERFORMANCE

## ADD TO BOTTOM OF STRENGTH AND CONDITIONING SECTION

When developing the individual weight training program the teacher/coach must establish the goal the weight training program is to have. The following chart outlines the type of weight training, the changes it can effect and the methods to meet the goal.

GOAL AREA: Strength and Power General Conditioning Muscular Endurance

CHANGE Increase in size of
DESIRED: muscle fiber

TYPE OF
WEIGHT Low reps (2-6)
TRAINING: heavy weights

Some increase in both Increase in size of muscle fiber and vascularization, blood supply to muscle

High reps (15-25)
light weights

Special Considerations

1. Younger athletes may do the weight training exercises using a broom handle with no additional weight.
2. When beginning the weight training program weight resistance should be kept low as should repetitions, sets and poundage should only increase as skill level improves.
3. As weight resistance is increased the athlete should wear a weight lifting belt for additional protection.
4. All weight training sessions should be supervised to insure that correct form is being used and that assistance is available if the athlete needs a "spot" during an exercise.
B. Range of Motion and Flexibility Activities

The need for good joint flexibility is needed in all sports. In speed skating, joint flexibility is all important, especially range of motion and flexibility of the hips, knees and the muscle groups in these areas. Upper body flexibility is also important, but to a lesser degree to assure that the athlete can get into a good basic position for skating. The teacher/coach must provide adequate off and on ice training to improve movement and flexibility.

Flexibility can best be described as the range of movement in a joint or series of joints. Coordinated, graded movements are important in developing synchronized muscle movement patterns needed in speed skating. Figure F, shows the various movement characteristics that are important in speed skating. Figure G, lists the muscles that are involved in the various movement patterns that occur during the push, glide and recovery stages of speed skating. To improve overall flexibility for the above movement characteristics and muscle groups the teach/coach must consider the two components that make up overall flexibility: static flexibility (total range of motion), and dynamic flexibility (movement of a joint through various ranges of motion at varying speeds.

The use of a firm steady static causes an inverse myotatic reflex, bringing about inhibition of not only the muscle whose tendon was put on stretch, but also the entire group of muscles involved. The relaxation of the stretched muscle allows for greater range of motion thus increased overall flexibility. Stretching becomes important as a warm-up activity to help elongate the muscle and increase the range of motion of the associated structures so they can work more efficiently. Static stretching should also be done as part of a cool down activity to again elongate and relax the muscles and joints that have been worked. Stretching during the training session may also be important if periods of hard exercise occur.

## Dynamic Stretching

Use of dynamic stretching involves a body segment put into movement by an active contraction of a muscle group, while the movement is then stopped by other muscle groups that act as antagonists. Examples of dynamic stretching include swinging, twisting, lifting, and kicking. The movements are all done with ease with the goal of loosening up the muscles and joints for harder exercise. The intensity that dynamic flexibility exercises are done at must be watched since dynamic stretching can cause muscle soreness.

The teacher/coach must evaluate the athlete's total physical activity program before beginning any range of motion/flexibility program. Performance in other sports can be effected if a coach begins an aggressive flexibility program when the athlete needs to be in a performance level training program for another sport.

Separate home training programs in Static Stretching and Dynamic Stretching/Flexibility have been developed for the Special Olympics speed skating athlete. The exercises outlined in the home training programs serve as a good foundation in training programs for most athletes and should not adversely effect performance in other sports if followed closely and done at a reasonable time interval. When developing the individual stretching and flexibility training programs for an athlete the teacher/coach must look at each stretch and flexibility exercise and ascertain that the athlete does not have and medical condition that may preclude doing one or all of the exercises.

## Special Considerations

1. Comfortable, loose clothing should be worn when doing all stretches.
2. Static stretches should be done using a firm steady stretch rather than jerky pulling movements.
3. The advanced skill athlete can add mild resistance to the dynamic stretching/flexibility exercises using light poundage wrist or ankle weights.
4. When beginning the stretching program, repetitions and sets should be kept low and only increase as skill level improves.

## C. Plyometric Activities

In speed skating the need for explosive-reactive power is essential to explode off the start line and provide a powerful thrust while pushing to the side during skating. To develop this explosive power exercises requiring powerful muscular contractions in response to rapid, loading or stretching of the muscle must occur. These type of exercises are known as plyometrics. Plyometric exercises enhance the conditioning of the athlete to develop faster and more powerful changes of direction by reducing the time needed to execute these changes in direction, thus increasing speed and power.

Since plyometric exercises emphasize power development both resistive and temporal overloads can be a rapid change of direction of the entire body or part of the body. Temporal overload involves concentrating on executing the exercise as intensely and rapidly as possible. The major movement patterns
in plyometrics involve bounds, hops, leaps, skips, ricochets, swings, and twists. The exercises are done at a force and speed that closely corresponds to the power movements and actions in speed skating. For this reason, some of the exercises are done with undamped landings (without delay-very little knee flexion) and others are done with damped landings (added Flexion at the knee). the athlete should be taught to land on the ground on the ball of the foot to gain maximal benefits from the exercises; a flat-footed land is okay.

As with other exercise activity the teacher/coach must evaluate the athlete's total physical activity program before beginning any plyometric exercise program. Performance in other sports can be effected if a teacher/coach begins an aggressive plyometric program when the athlete needs to be in a performance level training program for another sport. The Plyometric Home Training Program developed for the Special Olympics speed skating athlete should not adversely effect performance in other sports if followed closely and done at a reasonable time interval. when developing the individual plyometric training program for a athlete the teach/coach must look at each plyometric exercise and ascertain that the athlete does not have any medical condition that may preclude doing one or all of the exercises.

## Special Considerations

1. Comfortable, loose clothing should be worn when doing plyometric exercises.
2. When beginning the plyometric exercise training program repetitions and sets should be kept low and only increase as skill level improves.
3. A knees up-thumbs up practice should be developed which will help with balance and also keep the upper body in a more upright position.
4. When starting movements should be kept small and increase as the athlete becomes comfortable with the motor patterns. As skills improve intensity and force should increase.
5. Giving adequate rest between plyometric exercises is important. The use of a relay format offers rest time for the individual athlete. The relay format also adds some motivation to do the exercises at a greater intensity and force level.
6. Plyometric exercises should be done on grass or an adequately matted floor surface (gymnastic or running).

## D. Balance Activities

Balance is important in not only every day life experiences, but also all sport activities. In speed skating, balance is the difference between maintaining an upright position on skates or maintaining a sitting position on the ice. It is critical for the athlete to find that point where all parts in the body exactly balance each other out. This point of exact balance is the athlete's center of gravity. This imaginary point is the weight center of the skater. Knowing where this point is very important in learning the components that make up correct technique. Each athlete's center of gravity is different and is effected by age, height, weight, body type, and length of arms-legs-upper torso. In general the center of gravity of an adult athlete is usually located 2-3 inches below the belly button in the middle of the body. Knowing where this center of gravity is will help the athlete maintain an optimal basic skating position, know how close or far the skates need to be maintained and know how far he/she may push to the side without shifting the center of gravity making skating more inefficient.

Balance exercises stress developing better control of the individual athlete's center of gravity and gives the athlete an opportunity to explore the limit points of their center of gravity. Balance exercises also help the athlete develop better movement patterns for weight shifting when needed.

As with other exercises activity, the teacher/coach must evaluate the athlete's total physical activity program before beginning any balance exercise program. The Balance Home Training Program developed for the Special Olympics Skating athlete should not adversely effect performance in other sports
if followed closely and done at a reasonable time interval. When developing the individual balance training program for a athlete the teacher/coach must look at each balance exercise and ascertain that the athlete does not have any medical condition that may preclude doing one or all the exercises.

## Special Considerations

1. Comfortable, loose fitting clothing should be worn when doing all balance exercises.
2. The athlete should wear well fitting athletic shoes that provide support to the ankle area.
3. The athlete should be encouraged to keep feet as close together as possible and maintain a good or modified basic skating position while doing the balance exercises.
4. If the athlete has difficulty doing single leg balance exercises offer support using either a chair to hold on to or the coach/teacher may position themselves in front of the athlete and hold the athlete's hands; both will stabilize the upper torso so the non-supporting foot can be lifted off the ground.
5. When beginning balance exercise the time each is held or the number of repetitions done should be kept low and only increase as skill level improves.

## Skating Imitation Activities

The most practical exercises to improve on ice performance fall into the realm of dry-skating and skating imitation exercises. As with other exercises there are many difference types of dry skating. All have the goal of improving skating technique and conditioning. Dry skating involves maintaining a deep basic skating position, stepping side to side with explosive jumps and recover the extended leg in the same manner as the athlete would on ice. The upper body action and arm swing used on ice are also done while dry skating. If done correctly dry skating will begin to have the same sensation as gliding smoothly and powerfully over ice. Various skating imitation exercises mirror arm swing, pushing to side, and crossing over.

As the sport of in-line skating has become popular, some the traditional ice speed skating dry land exercise activities have become very popular and equipment has become more readily available. In-line skates themselves are a traditional dry skating imitation activity used in ice speed skating. Care must taken that basic skating position and push to the side are maintained as much as possible when using roller in-line skates. In-line skating by itself is not a good dry skating activity, but must be incorporated into a program of other activities and exercises. Slideboard exercises are another traditional dry skating activity that have become a popular exercise activity for even non skaters. A slideboard is a large sheet of Formica or plastic that is waxed. The athlete then imitates the straightaway push to side stroke and with practice moves from one end of the board to the other as if skating on ice. To practice the turn/crossing over movement as a dry skating activity the use of a turn cable is essential. The turn cable is a long piece of rubber cable with a belt attachment either on one or both ends. Due to the elasticity of the rubber cable tension and resistance can be controlled. For use for turn training a belt is attached to the athlete's waist, the athlete turns to the side position the cable off the right hip, the athlete then gets into a deep skating position, lean to the left placing tension on the cable and perform the crossover and recovery strokes. When done correctly the athlete will dry skate a circle around the coach who is attached to the other end of the turn cable maintaining consistent tension.

As with other exercise activity the teacher/coach must evaluate the athlete's total physical activity program before beginning any skating imitation exercise program. The Skating Imitation Home Training Program developed for the Special Olympic speed skating athlete should not adversely effect performance in other sports if followed closely and done at a reasonable time interval. When developing the individual skating imitation program for an athlete the teacher/coach must look at each skating imitation exercise and ascertain that the athlete does not have any medical condition that may preclude doing one or all of the exercises.

Special Considerations.

1. Comfortable, loose fitting clothing should be worn when doing skating imitation exercises.
2. The athlete should wear well fitting athletic shoes that provide support when doing skating imitation exercises.
3. Skating imitation exercises are best done on grass or an adequately matted floor surface (gymnastic or running).
4. When using the slideboard, turn cable, or in-line skating the coach must provide adequate supervision to insure use of proper technique and safety rules.
5. When beginning the skating imitation exercise program repetitions should be kept low and only increase as skill level improves.

## DEVELOPING A TRAINING PROGRESSION

Exercises and drills are not effective unless put into a training progression that builds on skills learned and stresses skills still needed to be learned. Figure H, presents a simple training progression. From this type of training progression the teacher/coach can plan what exercises and drills to utilize and insure that all skills are being addressed. From the training progression the teacher/coach will be able to plan the monthly, weekly and daily training program.

## GENERAL SHARPENING INSTRUCTIONS

## SET UP:

This is self explanatory for most jigs. Position the uprights about 2 cm wider apart than the length of your boot.

## CLAMP BLADES:

1. Open the jaws, and lay the blades in the jig, bottoms up.
2. Lift one blade into position, so the tube flange meets the jaws. If the jig has upstops, lift the blade to meet the upstop, then clamp the blades. Make sure tails are even, and repeat for the other blade.

## ALIGN BLADES:

3. If the blades are identical, (new blades usually are), the tube flanges are butted up against the jaws, or you've used upstops, then the running surfaces should be parallel in height. To test, lay the stone across the blades and make light crosswise scratches at several spots. Scratches should cross the full thickness of both blades if they're parallel in height. If you haven't used upstops, you may be able to correct by adjusting the height of one, or both ends of at least one blade. If you've already used upstops, or, even after adjusting height, you're still getting bad test scratches, this indicates that the blades are mismatched, and it will be difficult or impossible to get good edges on both blades over their entire length. Good quality new blades, or old ones that have been properly hand-sharpened should pose no problem. If they've seen an electric grinder, they're likely to be badly mismatched.
4. Tighten the wingnuts. Even though the jig is symmetrical, clamp the skates in exactly the same position every time. Decide which will be front and rear upright and mark them. With all but the best precision jigs, each copy is just a bit different than the next, so when switching jigs, the skates are a little harder to sharpen the first time in the new jig. The same thing can happen when simply orienting them differently in the same jig.

## SHARPEN:

5. Apply oil to coarse stone, and spread with your finger. Grind till full length of both edges of both blades have a noticeable burr. Check by picking with your fingernail, and see there's a good burr all the way up and down both blades. Then, with lengthwise motion, remove cross grain. Repeat with fine stone.

Diagonal, figure 8, large circle, small circles, counting strokes, and other motions are used successfully, and unsuccessfully; none are bulletproof. I prefer a wide diagonal. You can devise your own technique.

Whatever the motion, be sure to use the entire stone. In time, it will "dish" (it wears fastest in the center), but dish is minimized by making wide sweeps. Even when using lengthwise strokes, gradually skootch the stone across as you go. Otherwise, you'll get ruts in the stone. Ruts round the edges, and excessive dish compromises the squareness of the edge. Opinions vary on how much dish is acceptable, but I'd say anything much over 2 mm is a compromise.

Assuming the blades match, and have a good contour, (rocker; rock) remember to retain that shape as you sharpen; remove an equal amount of metal from front to back, on both blades. There's a natural tendency to take more off in the center, due to 3 things: a) The motion used (figure 8's??) . b) A tendency to let off pressure on the ends, and bear down in the center. c) The center portion dulls quicker in skating, so you tend to grind harder there to get a burr. In time, this creates a flat spot, or worse, a "hollow". These make skating difficult, and are very hard to correct.

## DE-BURR:

Remove the burr from both edges of both blades.
Many people lay the blade flat on a table edge, steady the skate with one hand, and de-burr with the other. This method works quite well and is unlikely to result in damage to the blades or the skater's thumb (and pride). Bracing the skate against your thigh with one hand, and de-burring with the other is nice, as it seems to give a more intimate feel of the edge, but if the stone slips off, you get a rounded edge and a very intimate feel of the blade slicing your thumb.

Use a little oil, and rub the stone flat on the blade, concentrating pressure on the burr. Some blades, especially new ones, may be slightly beveled right near the edge. This requires you to tilt the stone slightly to hit the burr. Unlike the grinding operation, it's OK to concentrate on a problem spot. Check by picking with your fingernail to see that the burr is gone everywhere.

## SPEED SKATING HOME TRAINING PROGRAM

Equipment needed: none.
General Instructions: The following dryland balance exercises should be done as a set with a short jog between each exercise to relax and loosen muscles. Each exercise should be held in a static position. Start at 10 seconds and increase time of each exercise in 5 second intervals until each one can be held for 30 seconds. The relaxation jog can be done as either a time interval 10 seconds and work up to 30 seconds) or a distance to be jogged (start at 25 meters and work up to 100 meters).

1. Static basic speed skating position: knees bent at $95^{\circ}$ angle, waist and chest at $55^{\circ}$. Hold for $10-30$ seconds.
2. Balance on right leg: maintain basic position raise left leg center weight over right knee. Hold for $10-30$ seconds.
3. Balance on left leg: maintain basic position raise right leg center weight over left knee. Hold for $10-30$ seconds.
4. Balance on right leg with push to side with recovery of left foot: maintain good basic position, maintain weight over support leg with good extension of the left leg with a smooth recovery motion. Hold for 10-30 seconds.
5. Balance on left leg with push to side with recovery of right foot: maintain good basic position, maintain weight over support leg with good extension of the right leg with a smooth recovery motion. Hold for 10-30 seconds.
6. Right leg balance with front to back kick of left leg: maintain basic position, axis of kick should be from knee, maintain weight over support leg. Hold for 10-30 seconds.
7. Left leg balance with front to back kick of right leg: maintain basic position, axis of kick should be from knee, maintain weight over support leg. Hold for 10-30 seconds.
8. Right leg balance with lateral raise of left leg: maintain basic position, axis of lateral raise should be from the hip, maintain weight over support leg. Hold for 10-30 seconds.
9. Left leg balance with lateral raise of right leg: maintain basic position, axis of lateral raise should be from the hip, maintain weight over support leg. Hold for 10-30 seconds.
10. Static basic position: maintain position of chest over knees over toes, $95^{\circ}$ at knees, $55^{\circ}$ at waist. Hold for 10-30 seconds.

Repeat set 1-3 times.

## Skating Imitation Drills:

Equipment needed: none--adequate room for drill and jog sequence.

General Instructions: All exercises should be done as a set with a jog between each exercise. Jog distance should be equal to the distance that the skating imitation exercise is done in (or 50 meters for static skating drills). Each exercise should be done for 10-50 meters. Repeat set 1-3 times. This can be a very taxing drill when done correctly.

1. Static skating: maintain good basic position, right leg push to side with recovery, alternate with left leg
push to side with recovery. Maintain weight over appropriate supporting leg. Do from 5-25 repetitions
each leg.
2. Low walk forward hands on back: maintain good basic position, step forward on right leg with full extension of left leg; pull left leg forward dragging toes stepping forward to gain full extension of right leg. Alternate leg movements. Do drill for 10-50 meters.
3. Low walk forward with elbows to opposite knees: same as \#2, add moving right elbow to left supporting
knee and left elbow to right supporting knee during walk sequence. Do for 10-50 meters.
4. Side walk to right: maintain good basic position, feet should be 6-12 inches apart, push off on left leg extending right leg to side, maintain weight over support leg, recover left foot to start position, repeat
sequence. Do for 10-50 meters.
5. Side walk to left: maintain good basic position, feet should be 6-12 inches apart, push off on right leg extending left leg to side, maintain weight over support leg, recover left foot to start position, repeat
sequence. Do for 10-50 meters.
6. Crossover walk to right: maintain good basic position, feet should be 6-12 inches apart, bring right foot
over left foot keeping feet parallel to one another, gain extension of left leg, recover left leg to start position, repeat sequence. Do for $10-50$ meters.
7. Crossover walk to right: maintain good basic position, feet should be 6-12 inches apart, bring left foot over right foot keeping feet parallel to one another, gain extension of right leg, recover right leg to start position, repeat sequence. Do for 10-50 meters.
8. Backward low walk: feet should be 6-12 inches apart, maintain good basic position, step back with right
foot maintaining weight over support leg, recover left leg bringing feet back together, step back with left
foot maintaining weight over support leg, recover right leg bring feet back together, repeat sequence. Do
for 10-50 meters.
9. Low walk forward to right and left: feet should be 12 inches apart, maintain good basic position, step off
to right on right foot extending left leg maintaining weight over support leg, recover left leg to position
next to right leg, step off to left on left leg extending right leg, recover right leg to start position, repeat
sequence. Do for 10-50 meters.
10. Low walk forward with arm swing: maintain good basic position, same as \#2, alternate armswing, right
arm forward with left support leg, left arm forward with right support leg, armswing should be no higher
than the shoulders either in front or in back. Do for 10-50 meters.

## Plyometric Drills:

Equipment Needed: none--adequate space needed for doing drills.
There should be a jog of 50-100 meters between each exercise to relax and loosen muscles for the next exercise.

1. Static 2-foot hop: stand with feet 6-12 inches apart, assume good basic position, hop as high as possible in place bringing knees to chest, do for 10 repetitions, work up to 25 in 5-hop increments.
2. Static 1-foot hop-right foot: stand with feet 6-12 inches apart, assume good basic position, raise left foot centering weight on right leg, hop as high possible in place on right leg bringing knee to chest, do for 10 repetitions, work up to 25 in 5-hop increments.
3. Static 1-foot hop-left leg: stand with feet 6-12 inches apart, assume good basic position, raise right foot centering weight on left leg, hop as high as possible in place on left leg bringing knee to chest, do for 10 repetitions, work up to 25 in 5-hop increments.
4. 2-foot hop forward/backward: stand with feet 6-12 inches apart, assume good basic position, hop forward on both feet as far as possible returning to good basic position, immediately hop backward to starting position and assume good basic position, without stopping hop backward as far as possible and then immediately hop forward to starting position. One repetition contains two hops forward and two hops backward. Do for 5 repetitions, work up to 25 in 5-hop increments.
5. 2-foot side hop (right and left): stand with feet 6-12 inches apart, assume good basic position, with both feet hop laterally to right as far as possible maintaining basic position, immediately hop to left to return to start position, without stopping again hop with both feet to the left as far as possible and then hop to right to return to original start position. One repetition contains two side hops to the right and 2 side hops to the left, do for 5 repetitions, work up to 25 in 5-hop increments.
6. 2-foot hop forward: stand with feet 6-12 inches apart, assume good basic position, with both feet hop forward as far as possible maintaining balance and basic position, do for 10 meters, work up to 25 meters in 5 meter increments.
7. 1-foot hop forward-right foot: stand with feet 6-12 inches apart, assume good basic position, raise left foot centering weight on right leg, hop forward on right leg as far as possible maintaining good basic position, do for 10 meters, work up to 25 meters in 5 meter increments.
8. 1-foot hop forward-left foot: stand with feet 6-12 inches apart, assume good basic position, raise right foot centering weight on left leg, hop forward on left leg as far as possible maintaining good basic position, do for 10 meters, work up to 25 meters in 5 meter increments.
9. Right-left 2-foot hop forward: stand with feet 6-12 inches apart, assume good basic position, with both feet hop forward to right as far as possible returning to basic position, immediately hop to left as far as possible, continue to alternate right-left hops, do for 10 meters, work up to 25 meters in 5 meter increments.
10. Right-left 1-foot leap forward: stand with feet 6-12 inches apart, assume good basic position, center weight on left leg, leap forward on right leg as far as possible, as right leg assumes support position recover left foot to position 6-12 inches from right foot, center weight on right leg, leap forward on left leg as far as possible, as left leg assumes support position recover right foot to position 6-12 inches from left foot, continue to alternate right leg-left leg leaps, do for 10 meters work up to 25 meters in 5 meter increments.

These drills are performed best on grass for natural cushioning. A marked football (American) or soccer field is ideal. This can be a very strenuous exercise drill. Extra caution is needed for anyone with knee injuries or leg joint problems.

## CROSS TRAINING SUGGESTIONS

The Speed Skating coach should view the training program as a full year program even if your skaters do not practice skating year-round. It is important to provide your skater with suggestions on other sports they might participate in that will help them progress in speed skating. Summer sports that are appropriate for Speed Skaters include Track - longer distance running, standing and running long jump, pentathlon, half marathon; Football, Volleyball, Cycling, Gymnastics, and Basketball. The sport selected should meet the goals of providing cardiovascular training and endurance as well as improving muscle tone and flexibility.

As the actual speed skating season approaches, the speed skating coach should take time to map out the season and design a Season Plan.

## SECTION V - GETTING READY FOR COMPETITION

## TAKING AN ATHLETE OR TEAM TO A TOURNAMENT

Competition experiences are an important part in the athlete's training program. If you are fortunate enough to have other organizing groups (local Special Olympics, or other sport groups) conduct additional tournaments and meets that include divisions for your athlete and team, your athletes will benefit greatly. Additional competition experiences provide your athletes the opportunity practice those other skills associated with competition that do not occur while on the ice. Checking in, waiting to be called for a race, cheering on team mates and attending awards ceremonies are skills that cannot be trained, but must be experienced. In order for your athlete and team to benefit from these additional competition experiences, you the coach have special tasks to do before, at and after the competition.

## Before the Competition

Review registration materials, noting: events/divisions offered and deadlines. Cost of registration. Procedures for registering, i.e. signatures and approvals needed.

- Assess each athlete's readiness to attend a competition, discuss behavior concerns or special needs with parent and/or caregiver as appropriate.
- Arrange for uniforms and make sure all athletes attending have proper equipment.
- Arrange for transportation, housing and meals if needed.
- Review medical and release forms for effective dates and any special medical needs.
- Make sure necessary registration materials are submitted.
$\square$ Inform athletes, their family, and friends about the plans and any special arrangements necessary for family and friends to attend as spectators.
$\square$ Arrange assistance for any athlete needing assistance in personal care, medications and eating.
Recruit necessary assistant coaches/chaperones needed.
- Inform local media if appropriate.

Continue training providing experiences as close to those that will occur at the competition.

- Share the competition schedule and any special event plans with assistance coaches, chaperones, athletes, family members and friends.


## At the Competition

- Assist athlete in checking in at those competitions where individual registration is conducted, In the case of team registration, make sure to register your team being sure to note: competition times, break times, emergency and inclement weather plans, where to get medical assistance.
- Build the athletes' schedule around the competition including: pre-competition warm-up and stretching, pre-competition confidence building, pre-competition snacks (what can and cannot be eaten).
- Feature each athlete, confirming their pride in their performance, regardless of placement.
- Give each athlete as much information about their performance as possible- times, comparison to personal best, etc.
- Make time to keep assistant coaches and chaperones up to date and listen to concerns and suggestions.
- Monitor the physical and emotional condition of each athlete.
$\square$ For those athletes unable to make sound judgments, monitor meal and snack selections, personal hygiene, and use of spending money.


## After the Competition

$\square$ Before leaving the competition venue make sure that each athlete has collected all equipment and personal belongings.

- Make sure transportation home is provided.
$\square$ Thank assistance coaches and other volunteers.
- Make arrangements to get results to local media.
- Provide update to families and caregivers as appropriate.


## A. Taking an Athlete or Team to a Competition

## Before the Tournament

Confirm with the Games Facility Committee that the competition site is available.
$\square$ Appoint a Venue Coordinator for each individual event.
$\square$ Arrange to have signs and decorations around the facility.
$\square$ Inform athletes and their families about the plans, housing, directions and schedule of events for the competition.
$\square$ Review all entry forms and coordinate and arrange to have proper ID's for each of the entries.
$\square$ Review scoring, announcing, timing and all applicable procedure with the officials.
E Explain to every volunteer what his/her responsibility is and answer any questions they might have.
$\square$ Inform local media of the event.

## At the Competition

$\square$ Arrive at the site at least one hour before the scheduled start.
Check all competition equipment, including timing and starting devices prior the start of the first race.
$\square$ Allow athletes to enter rink and warm-up at least one hour before start.
$\square$ Begin the event when it is scheduled to begin.
$\square$ Conduct time trials and make any necessary adjustments/changes.Arrange to make changes after each day to adapt to environment.

## After the Competition

$\square$ Return or store all competition equipment.Thank all volunteers who assisted in running/preparing the competition.
$\square$ Update all athlete's and their families regarding the results of the competition.
B. Divisioning in Special Olympics Speed Skating

## MANAGING A SMALL COMPETITION

## VOLUNTEERS AND OFFICIALS NEEDED

$\square$ Starter
Corner Officials
Finish Judges
$\square$ Timers
$\square$ Referee
Clerk of Course

- Scorers


## EQUIPMENT NEEDED FOR COMPETITION

Starter's gun and shells
Public Address System
Lap Counters
Clipboards
Stopwatches
Time Boards
Time and Finish Cards
Division Sheets
Results Sheets
Tables and Chairs
Adding Machine
Rule Books
Ice Chest
First-Aid Kit
Facility Checklist
Sample Script for Opening, Closing, and Awards Ceremonies
RIC SECTION -- NO WRITING REQUIRED
o Sample Script for Announcer during Speed Skating Competition
D. Special Olympics Speed Skating Rules

Available at



## GLOSSARY OF SPEED SKATING TERMS

Acceleration- Rate of change of the velocity of a moving body. If velocity is constant, acceleration is zero; if velocity is decreasing, acceleration is negative.

ASU- Amateur Speed Skating Union of the United States of America. Development branch of NGB for speed skating in the USA.

Basic Position- skating position with both feet on ice legs bent at 90 degrees, back bent at 45 degrees with center of gravity in middle of skate blade.

Ballangrud- trade name of a Norwegian skate
Bell Lap- last lap of any race. Lap bell is rung at the start of the final lap,
Blocks- markers used to define track boundaries both short track and long track.
Bounds- plyometric exercise involving emphasis on attaining maximal height and horizontal distance. Can be done with both feet or in alternate foot pattern.

Buff- tiny lip of built up metal on the edge of the blade as a result of sharpening the flat of the skate with a sharpening stone.

Buff Stone- small sharpening stone use to remove burr from edge of skate.
C.A.S.S.A.- Canadian Amateur Speed Skating Association. NGB for speed skating in Canada.

Cat-Back- Rounding of the back created by relaxation of the upper body allowing shoulders to drop during skating.

Center of Gravity- Point at which the weight of the entire body is concentrated. reference where all parts in a body balance each other exactly.

Circuit Training- Program consisting of a series of exercises the athlete must perform at a particular work load ( repetitions or time). Program-n should stress all muscle groups.

Cross-over- Skate stride involving placing the right skate over and in front of the left skate and returning the left skate in back of right skate to its position. Used in skating turns.

Damped Landing- plyometric landing involving the added flexion of the knees.
Dry Skating- On grass simulation of skating motion. Done as part of summer and dry land program.
Dry Training- Training done in the off season.
Endurance- ability to resist fatigue in the muscles, to continue a physical activity past the point of being tired,

Fartlek- Swedish term for "speed play". An endurance training workout demands hard but non-timed efforts of various exercises over varied terrain, with rest periods consisting of light activity or jogging. Emphasis is getting tired without feeling tired. Workout can be from ]- $11 / 2$ hours in length.

Flat Spot- condition when the skate blade loses its normal curvature (rock) and becomes flat along a portion of its length.

Flexibility- range of motion in a joint or series of joints allowing for graded movement patterns.
Force- physical action that produces motion or a change in velocity or direction.
Friction- the resistance to sliding that occurs when the boundary between two surfaces come in contact and the motion of one is contrary to the motion or characteristics of the other.

Guards- Rubber, leather or plastic protective covering for skate blades, Used to protect the skate blade when walking to and from the ice surface.

High Point- the highest place along the rock of the skate blade.
Hollow- condition when there are two high points along the rock of the skate blade. The area between the two high points does not make contact with the ice.

Hops- plyometric exercise involving emphasis on attaining maximal vertical height and maximal leg movement. May be done with one or both legs.

ISU- International Skating Union. The IGB for speed skating and all figure skating.
Inertia- the property of a body which tends to resist any change in its current state of rest or movement.

Intensity- the effort that must be put into a training session to achieve the desired training effect. Usually measured by heart rate (aerobic capacity).

Jig- devise used to secure skate in for hand sharpening.
J.O.H.A. - trade name of a Dutch sharpening jig.

Jumps- plyometric exercise involving emphasis on attaining maximal height no horizontal distance and rate of execution is secondary. Can be done on one, both or alternating legs.

Leaps- plyometric exercise involving single effort in which emphasis is on both maximal height and horizontal distance. Can be done with either one or both legs.

Long Track- style of skating done on a track of 250 M or greater. Olympic style skating is form of Long Track skating. Mass Start Long Track skating popular in USA and Canada.

Low Walk- a conditioning exercise in which the body position has a similarity to the position used while skating.

Mass Start- type of competition where three (3) or more skaters compete directly against each other. Goal is to cross the finish line first.

Metric Style- another name for Olympic Style skating.

Pack Style Start- name used to describe Mass Start competition in the USA.
Power- the cumulative effect of speed and strength.

ODLO- Norwegian manufacturer of racing skins (suits) and warm-up clothing,
Offset- the placement of the left blade on short track skates to the left to accommodate turning (cornering) on the short track.

Olympic Style- type of racing done on 400 Meter track. Only two skaters skate at a time and race against the clock. Each skater skates in a separate lane, but must cross over on back stretch to switch lanes to insure each skates the same distance. Goal is to record the fastest time.

Overcorrecting- the practice of exaggerated movement to correct a bad technical habit. Done slowly the skills are strongly emphasized. As speed increases the exaggeration decreases and the bad habit is eliminated.

Planert- trade name of speed skates once manufactured in USA and then Canada. Name used to describe boot style long track skate.

Relaxation- the systematic resting of muscles through the release of tension. This is done to reduce muscle fatigue.

Ricochets- plyometric exercise involving rapid rate of leg and foot movements with minimal vertical and horizontal distance allowing for greater rate of execution.

Rock- the curve of the skate blade. Also called rocker.
Rotary Motion- the act of supplying equal or greater force than the centrifugal force associated with traveling in a circular (or semi-circular) direction.
S.S.S. - name of Japanese manufacturer of skates and jigs.

Sammelagt- point scoring system used in Olympic style skating. Points based on 500M time converted into point value. Points for all other race distances are determined by dividing the race time by the number of 500 M intervals in that distance, i.e. $1000 \mathrm{M}=2500 \mathrm{M}$ intervals, $1500 \mathrm{M}=3500 \mathrm{M}$ intervals.

Sccabards- another name for skate guards.
Schedules- list of incremental times designed to give a skater a program to follow while racing.
Short Track- style of racing done on a track marked on a hockey rink.

Skins- Lycra- nylon racing suit that conforms to body. May be one-piece or two piece.

Skips- plyometric exercise done in an alternating hop-step sequence with emphasis on both height and horizontal distance.

Snow line- small ridge of snow or shaved ice used to mark the outer and inner track on an outdoor long track oval.

Straight Edge- precision made piece of steel used to check the rock and straightness of a skate blade.
Strength- the ability to generate force.
Style/Form- the individual adaptations of the basic speed skating movements.
Swings- plyometric exercise involving emphasis on lateral, horizontal, or vertical movement of the trunk with secondary emphasis on shoulder, chest and arm movement.

Taper- the gradual lessening of work load in conditioning to give the athlete a rest period before an increased work load is again demanded.

Technique- the basic physical movements that everyone must perform correctly in order to speed skate.

Time Trials- conditioning exercises that involve skating at an optimal speed for a required period of distance or time that equals or goes beyond the distance or time of a skating event. Additional definition includes the events skated during a metric speed skating competition.

Twists- plyometric exercise involving emphasis on the torquing/lateral movement of the torso without involvement of the shoulders and arms.

Undamped Landing- plyometric landing without delay ( no additional knee flexion for cushioning landing) results in higher power and force.

Viking- major Dutch manufacturer of skates, jigs, sharpening stones and skate supplies.

Ving- major Norwegian manufacturer of skates, jigs and sharpening stones.
Warm- Ups- clothing worn to keep wan-n prior to and after skating.

## INDIVIDUALIZED EDUCATION PROGRAM

Public Law 94.142 defines physical education as the following content areas:
Physical Fitness
Motor Fitness/Skills
Aquatics
Dance
Individual and group games
Individual, dual and team sports
This Special Olympics Sport Skills Program can be used to develop a comprehensive program plan toward growth in many of these content areas. In addition, this Sport Skill Program can move the student toward a transition into the non-handicapped mainstream.

SAMPLE IEP PHYSICAL EDUCATION ANNUAL PROGRAM GOALS UTILIZING SPEED SKATING

| Content Area | Annual Goal | Short term <br> objective | Techniques |
| :--- | :--- | :--- | :--- |
| Physical Fitness | Improve cardio- <br> respiratory endurance | Skate for 20 minutes | Count laps, time; <br> increase weekly |
| Motor Skills | Increase functional <br> balance on both sides | Skate on right foot for <br> 10 meters; skate on left <br> foot 10 meters <br> Maintain two-foot glide <br> for 20 meteres | Basic position; Push to <br> right and left <br> Leg retirn drills |
| Individual Sports | Complete a 100M race | Learn proper start | Start drills <br> Alternate push to side <br> Practice with pistol <br> Two-arm swing |
| Transition to <br> Community setting | Skate/train with local <br> club/group | Straight away strokes <br> Crossover drills <br> Perform entire race <br> skates clothing and <br> Select club <br> Handle money | Put skills together in <br> sequence <br> Attend competition |
| Choose from samples |  |  |  |
| Skate a public session | Practice paying fees |  |  |


|  |  | appropriately <br> Learn safety rules |  |
| :--- | :--- | :--- | :--- |

## ICE EXPERIENCES FOR THE VERY CHALLENGED ATHLETE

Participation in Special Olympics Speed Skating may not benefit the athlete with significant motor difficulties or other conditions/behaviors them meaningful training. Yet exposure to ice to develop awareness of the safety around ice may be of great benefit.

The following brief program outline is presented to give these athletes a meaningful experience involving ice.

## Materials Needed:

One (1) hour of ice time on hockey rink.
Skate Aides or Rubbermaid 80 gallon garbage cans (upside down).
Speed Skates or other skates that will fit over athletes' hands.
One (1) skater to serve as demonstrator.
One (1) container or water and one (1) cup for each athlete participating. One (1) ice cube for each athlete participating.
One (1) metal fork for each athlete participating.
Warm clothing and gloves for each athlete participating.
Prior to the program meet with the rink manager and describe the purpose of your program and what you will be doing on the ice. Be sure to inform him that coaches and athletes will be on the ice wearing street shoes.

## OFF-ICE PROGRAM

1. Meet athletes in warming area. If possible have Rink Manager greet group and provide tour of facility. Include in tour: admission area, skate rental area, locker rooms, bathrooms, ice arena, Zamboni area, training room, and any other areas of interest. If available each athlete should be given a brochure that describes the facility. This can be used for discussion at home and after the program.
2. While in warming area talk to athletes about ice skating, the different types (speed skating, figure skating and hockey) and the history of skating ( see appendix for history of speed skating).
3. While in warming area talk about what ice is:
A. Give each athlete small cup of water. Ice $=$ water + cold temperature .
B. Give each athlete one ice cube. Allow athlete to touch ice cube to feel coldsensation. Demonstrate using metal fork how friction (moving tongs of fork quickly across flat surface of ice cube) creates heat making the ice cube melt. Show the ridges the fork tongs create as the ice is melted. Allow each athlete to try to get the ice cube they have to melt using the metal fork.
C. Discuss with athlete that the melting ice lubricates the surface of the ice cube making it slippery and turning the ice cube back into water. (Friction + Increased movement $=$ Heat; Ice + Heat $=$ Water).
D. At very end of session allow athlete to place ice cube in mouth to experience cold sensation.

## ON-ICE PROGRAM

1. Before stepping onto the ice, make sure each athlete has gloves and other suitable warm clothing on.
2. Have athletes enter ice through rink door. Instruct athletes to hold onto the side walls and shuffle their feet while they walk along the wall. Instruct athletes to keep knees slightly bent to help with balance. Provide assistance to those athletes who may not have necessary motor skills to do task.
3. When all athletes are on the ice, instruct them to push their feet forward and backward while holding onto the wall, Discuss with the athletes how the movement of their feet backward and forward are creating friction and heat and melt the ice.
4. Assist all athletes down onto the ice. Give each athlete a pair of ice skates to fit over their hands. While kneeling on the ice, have athletes move hands backward and forward with skate blades on the ice. If possible have athletes take gloves off after this task to feel the grooves the blade have made in the ice. Discuss how these grooves are similar to those created by moving the fork across the ice cube.
5. Demonstrate how to safely get to a standing position on the ice. First to both knees, then to one knee and up. Assist those athletes who need assistance to get to a standing position.
6. Have athletes return to a position next to the dasher boards. If possible have an experience skater demonstrate the basic skating skills listed in this sport skill guide and possibly demonstrate other more advanced skills.
7. Have athletes exit ice safely. Discuss with athletes how ice on sidewalks and streets are similar to that ice they were just on. Discuss with athletes the safety measures needed to walk on icy surfaces.
8. Return all equipment, If time permits and a snack area is available treat each athlete to a warm drink.

## TAKING AN ATHLETE OR TEAM TO A TOURNAMENT

Competition experiences are an important part in the athlete's training program. If you are fortunate enough to have other organizing groups (local Special Olympics, or other sport groups) conduct additional tournaments and meets that include divisions for your athlete and team, your athletes will benefit greatly. Additional competition experiences provide your athletes the opportunity practice those other skills associated with competition that do not occur while on the ice. Checking in, waiting to be called for a race, cheering on team mates and attending awards ceremonies are skills that cannot be trained, but must be experienced. In order for your athlete and team to benefit from these additional competition experiences, you the coach have special tasks to do before, at and after the competition.

## Before the Competition

- Review registration materials, noting: events/divisions offered and deadlines. Cost of registration. Procedures for registering, i.e. signatures and approvals needed.

Assess each athlete's readiness to attend a competition, discuss behavior concerns or special needs with parent and/or caregiver as appropriate.

- Arrange for uniforms and make sure all athletes attending have proper equipment.
- Arrange for transportation, housing and meals if needed.
- Review medical and release forms for effective dates and any special medical needs.
- Make sure necessary registration materials are submitted.

Inform athletes, their family, and friends about the plans and any special arrangements necessary for family and friends to attend as spectators.

- Arrange assistance for any athlete needing assistance in personal care, medications and eating.
- Recruit necessary assistant coaches/chaperones needed.
- Inform local media if appropriate.

Continue training providing experiences as close to those that will occur at the competition.
$\square$ Share the competition schedule and any special event plans with assistance coaches, chaperones, athletes, family members and friends.

## At the Competition

- Assist athlete in checking in at those competitions where individual registration is conducted, In the case of team registration, make sure to register your team being sure to note: competition times, break times, emergency and inclement weather plans, where to get medical assistance.
$\square$ Build the athletes' schedule around the competition including: pre-competition warm-up and stretching, pre-competition confidence building, pre-competition snacks ( what can and cannot be eaten).
$\square$ Feature each athlete, confirming their pride in their performance, regardless of placement.
- Give each athlete as much information about their performance as possible- times, comparison to personal best, etc.
- Make time to keep assistant coaches and chaperones up to date and listen to concerns and suggestions.
- Monitor the physical and emotional condition of each athlete.

For those athletes unable to make sound judgments, monitor meal and snack selections, personal hygiene, and use of spending money.

## After the Competition

- Before leaving the competition venue make sure that each athlete has collected all equipment and personal belongings.
- Make sure transportation home is provided.
$\square$ Thank assistance coaches and other volunteers.
- Make arrangements to get results to local media.
- Provide update to families and caregivers as appropriate.


## REFERENCES

Alter, M.J. (1990). Sport Stretch. Champaign, IL: Leisure Press.
Amteur Speed Skating Union of the United State/ U.S.I.S.A. Instruction Manual - Novice Development Seminar. Glen Ellyn, IL: Amateur Speed Skating Union of the United States.

Anderson, B. (1980). Stretching. Bolinas, CA: Shelter Publications Inc.
Arnheim, D. D. (1985). Modern Principles of Athletic Training. St. Louis: Times Mirror/Mosby College Publishing.

Canadian Amateur Speed Skating Association (1978). Level 1 - Coaching Manual - Speed Skating. Canadian Amateur Speed Skating Association.

Canadian Amateur Speed Skating Association (1980) Level 2 - Technical Manual - Speed Skating. Canadian Amateur Speed Skating Association.

Department of the Army, U.S.A. (1985) Physical Fitness Training, FM 21-20. Washington, DC: U.S. Government Printing Office.

Garfield, C.A. \& Bennet, H. Z. (1984). Peak Performance. New York: Warner Books.
Griffith, H. W. (1986). Complete Guide to Sport Injuries. Los Angeles: Body Press
Hatfield, F.C. (1989). Power - A Scientific Approach. Chicago: Contemporary Books Inc.
Hazeldine, R. (1985). Fitness for Sport. Marlborough, ENG: The Crowood Press.
Holum, Dianne. (1984). The Complete Handbook of Speed Skating. Lake Placid, NY: High Peaks Cyclery Press.

International Skating Union. (1994). Regulations 1994-1996. Davos, SWI.
Larson, L. A. (1976). Foundations of Physical Activity. New York: Macmillan Publishing Co., Inc.

Magill, R. A., Ash, M. J. \& Smoll, F. L. (1982). Children in Sport. Champaign, IL: Human Kinetics Publishers Inc.

Orlick, T. \& Botterill, C. (1975). Every Kid Can Win. Chicago: Nelson - Hall.
Partington, J. T., Orlick, T. \& Salmela, J. H. (1982). Sport in Perspective. Ottawa: The Coaching Association of Canada.

Pearl, B. \& Moran, G.T. (1986). Getting Stronger. Bolinas, CA: Shelter Publications Inc.

Radcliffe, J. C. \& Farentinos, R.C. (1985). Plyometrics - Explosive Power Training. Champaign, IL: Human Kinetics Publishers, Inc.

Simon, H. B. \& Levisohn, S.R. (1987). The Athlete Within - A Personal Guide to Total Fitness. Boston: Little Brown and Company.

Southmayd, W. \& Hoffman, M. (1981). Sports Health - The Complete Book of Athletic Injuries. New York: G.P. Putnam's Sons.

Warren, W.E. (1988). Coaching and Winning. Englewood Cliffs, NJ: Prentice Hall.
Weider, J. \& Reynolds, B. (1989). Ultimate Bodybuilding. Chicago: Contemporary Books Inc.

