MERIT BADGE SERIES

SKATING

BOY SCOUTS OF AMERICA®

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SKATING

"Enhancing our youths' competitive edge through merit badges"

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Note to the Counselor

Skating activities present inherent safety concerns, primarily the risk of falls and collisions. The guidelines below emphasize prevention and are meant to cover all Boy Scouts of America skating programs. Scouts should always practice safety and courtesy and obey all local, rink, or park rules. Every Skating merit badge program or activity must follow the BSA guidelines, which are set forth in the *Guide to Safe Scouting* and are repeated here. Review these guidelines with Scouts, and be sure they understand each one.

1. BSA skating at any level shall be supervised by an adult who is at least 21 years of age, experienced in the use of skates and skateboards, willing to conscientiously accept responsibility for the safety of all participants, and committed to compliance with BSA safety guidelines and local laws.

2. In-line skating, hockey, racing, or similar activities are to be held only in areas free of pedestrian and vehicular traffic, and hazardous fixed objects. No skating activity is authorized on streets that have not been blocked off to traffic.

3. Pathways and skating surfaces must be free of defects or features unsuited to skating. Evaluation of the area by the supervisor should precede any BSA activities.

4. Before permitting equipment to be used in a BSA activity, the supervisor should determine that all skates and skateboards are well-maintained and in good repair consistent with the manufacturer's recommendations. Actual maintenance and repair are the owner's responsibility.

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5. For all street or pavement skating activities, participants should wear properly fitted helmets that meet *American National Standards Institute* standards, padded gloves, wrist supports, and elbow and knee pads. No street or pavement skating is authorized without helmets.

6. Skaters must NEVER "hitch a ride" on any vehicle.

7. Parents or legal guardians must be informed and must consent to youth participation in a BSA skating activity.

8. The adult supervisor must be sure that all participants understand and agree that skating is allowed only with proper supervision and in compliance with the safety guidelines. Youth members should respect and follow all instructions and rules of the adult supervisor. When people know the reasons for rules and procedures, they are more likely to follow them. Supervisors should be strict and fair, showing no favoritism.

Terms shown in *italics* can be found in the terminology section at the back of this pamphlet

Skating merit badge instruction should follow the requirements, procedures, and techniques presented in this pamphlet for the discipline of choice (ice skating, roller skating, or in-line skating). The information contained in this pamphlet has been organized for the individual skating disciplines in a sequence that the authors have found to be most practical when working with Scouts. The learning objectives, which can be attained by the average Scouts BSA member, should emphasize safety and basic skill proficiency.

Requirements

1. Do the following:
   a. Explain to your counselor the most likely hazards associated with skating and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
   b. Show that you know first aid for injuries or illnesses that could occur while skating, including hypothermia, frostbite, lacerations, abrasions, fractures, sprains and strains, blisters, heat-related reactions, and shock.
2. Complete ALL of the requirements for ONE of the following options.

ICE SKATING OPTION

a. Do the following:
   (1) Give general safety and courtesy rules for ice skating. Discuss preparations that must be taken when skating outdoors on natural ice. Explain how to make an ice rescue.
   (2) Discuss the parts and functions of the different types of ice skates.
   (3) Describe the proper way to carry ice skates.
   (4) Describe how to store ice skates for long periods of time, such as seasonal storage.

b. Do the following:
   (1) Skate forward at least 40 feet and come to a complete stop. Use either a two-footed snowplow stop or a one-footed snowplow stop.

(2) After skating forward, glide forward on two feet, then on one foot, first right and then left.

(3) Starting from a T position, stroke forward around the test area, avoiding the use of toe picks if wearing figure skates.

c. Do the following:

(1) Glide backward on two feet for at least two times the skater's height.

(2) Skate backward for at least 20 feet on two skates.

(3) After gaining forward speed, glide forward on two feet, making a turn of 180 degrees around a cone, first to the right and then to the left.

d. Do the following:

(1) Perform forward crossovers in a figure-eight pattern.

(2) Explain to your counselor the safety considerations for running or participating in an ice skating race.

(3) Perform a hockey stop.

ROLLER SKATING OPTION

a. Do the following:

(1) Give general safety and etiquette rules for roller skating.

(2) Discuss the parts and functions of the roller skate.

(3) Describe five essential steps to good skate care.

b. Do the following:

(1) Skate forward with smooth, linked strokes on two feet for at least 100 feet in both directions around the rink and demonstrate proper techniques for stopping.

(2) Skate forward and glide at least 15 feet on one skate, then on the other skate.

c. Do the following:

(1) Perform the crosscut.

(2) Skate backward for at least 40 feet on two skates, then for at least 15 feet on one skate.

(3) Skate forward in a slalom pattern for at least 40 feet on two skates, then for at least 20 feet on one skate.

(4) Skate backward in a slalom pattern for at least 15 feet on two skates.

d. Do the following:

(1) Shuttle skate once around the rink, bending twice along the way without stopping.

(2) Perform a widespread eagle.

(3) Perform a mohawk.

(4) Perform a series of two consecutive spins on skates OR hop, skip, and jump on skates for at least 10 feet.

e. Do the following:

(1) Race on a speed track, demonstrating proper technique in starting, cornering, passing, and pacing.

(2) Perform the limbo under a pole placed at least chest high OR shoot-the-duck under a waist-high pole and rise while still on one foot.

(3) Perform the stepover.

(4) While skating, dribble a basketball the length of the floor, then return to your starting position OR push a hockey ball with a stick around the entire rink in both directions.

IN-LINE SKATING OPTION

a. Do the following:

(1) Give general and in-line skating safety rules and etiquette.

(2) Describe the parts and functions of the in-line skate.

(3) Describe the required and recommended safety equipment.

(4) Describe four essential steps to good skate care.

b. Do the following:

(1) Skate forward with smooth, linked strokes on two feet for at least 100 feet.

(2) Skate forward and glide at least 15 feet on one skate, then on the other skate.

(3) Stop on command on flat pavement using the heel brake.

c. Do the following:

(1) Perform the forward crossover.

(2) Perform a series of forward, linked swizzles for at least 40 feet.

(3) Skate backward for at least 40 feet in a series of linked, backward swizzles.

(4) From a strong pace, perform a lunge turn around an object predetermined by your counselor.

(5) Perform a mohawk.

d. Do the following:

(1) Perform a series of at least four one-footed downhill slaloms on pavement with a gentle slope.

(2) Describe how to pass a pedestrian or another skater from behind.

(3) Describe at least three ways to avoid an unforeseen obstacle while skating.

(4) Describe two ways to get on and off a curb, and demonstrate at least one of these methods.

Contents

Introduction

This merit badge will introduce you to the exciting world of ice skating, roller skating, and in-line skating. Get ready for new challenges, fun, and improved confidence in your skating skills.

You can choose ice, roller, or in-line skating for this merit badge. If you have never skated before, you will learn the basic moves first. If you already know how to skate, you can perfect your techniques and move on to more advanced skating skills while training for the merit badge.

Try going to public skating sessions or enrolling in group lessons for more instruction at a reasonable price. Visit a local ice rink or roller rink (for roller and in-line skating) to ask about classes, examine equipment, and talk with an instructor or skating professional.

Regardless of which kind of skating you choose, this sport offers many opportunities beyond what you learn for the merit badge. If you try ice skating or roller skating, you might launch an athletic career in figure skating, freestyle, pairs, dance, hockey, or speed skating. In-line skaters can get involved in marathons, speed skating, hockey, and *aggressive* skating—both *street* and *vert*.

Power Ice Skating

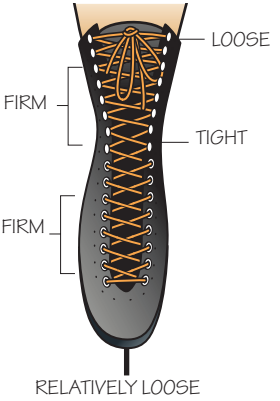
Tips for the Beginner

The following tips can help you start out on the right foot with ice skating.

Choose Skates That Fit

When you visit an ice skating rink for the first time, you might need to rent skates. Rental skates are not sized like regular street shoes. Make sure you know your street shoe size and then, when renting skates, ask for one size smaller. (If you have a small foot, ask for a half-size smaller.)

Your toes should come to the end of the skating boot but should not feel cramped. Try on the rental skates. If there is too much toe space, ask for a smaller size.



Before putting on your skates, loosen the laces all the way down to the base of the skate. Otherwise, the boot may seem too small when you attempt to slide your foot in. With your foot correctly in place, pull up your socks to remove any wrinkles. Pull the long tongue of the skate up firmly, in case you have pushed it down in front of your toes.

When lacing your boots, do not overtighten the laces near your toes. Your toes should be free to wiggle. Lace firmly from the bottom of the boot until you reach the ankle area. On most boots, this area coincides with the top pair of eyelets or fasteners. At this point, lace tightly. Lace the bottom hooks tightly, and then go back to lacing just firmly again. At the top, the lacing should be relatively loose to avoid restricting circulation in your legs and feet. Lastly, tie and tuck in the laces.

Although beginners do not need to have extremely sharp skates, the blades should not be blunt. To test for sharpness, run the back of your thumbnail across the *edge* of the blade with light pressure. An adequately sharpened edge should scuff off a fraction of the thumbnail surface.

It is important to note that new skates are shipped from the factory with dull blades so that the skates do not get damaged in shipping. You must always have a new pair of skates sharpened before skating on them for the first time.

Classes for Beginners. Check at an ice rink about ice skating classes for beginners. Learning the right way from the start will help you avoid bad habits. Many rinks offer special skating classes for Scouts at reduced prices.

Understand the Edges

Take a look at the bottom of your figure skate blade. It has a concave groove running along the length. When you place the blade on the ice in an upright position, the two sharpened edges make contact with the ice. When the skate moves over the ice with both edges making contact, the skate will move in a straight line.

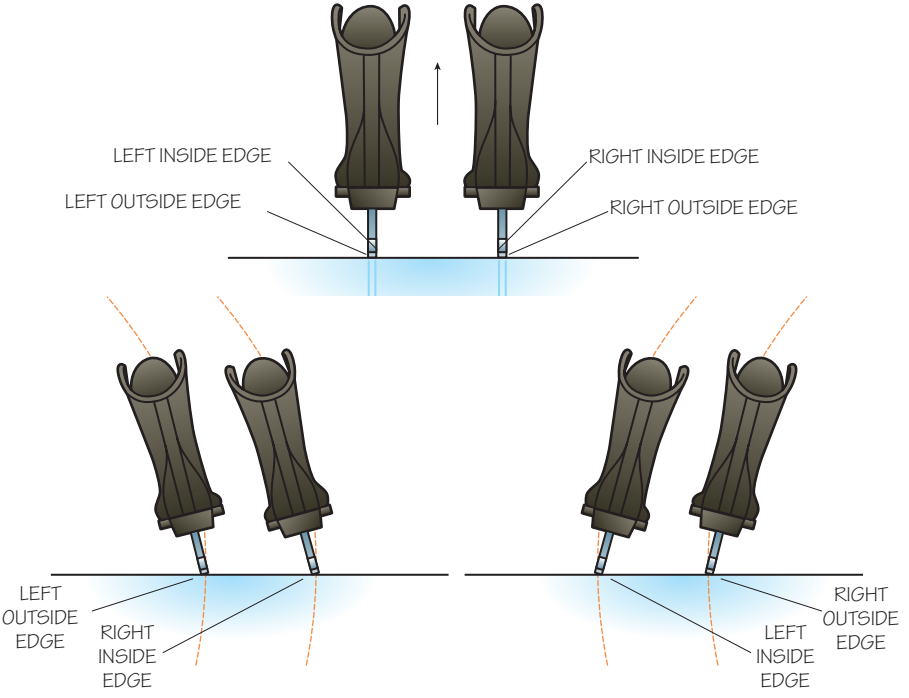
Now hold the skate upright on a smooth, flat surface. Look at it from the side. You will notice the blade is rockered (slightly curved), so only about an inch of its length actually is in contact with the surface. This degree of blade that is not in contact with the surface makes the figure skate maneuverable.

The rockering permits *spins* on one foot, just as a quarter will spin if you hold it vertically on a surface and flick it.

If the blade of a skate is touching the ice at an angle, only one of the two sharpened edges will cut into the ice, while the other edge will not make contact. Since the sharpened edge that is in contact is curved (rockered), the skate will move over the ice in a curving arc.

Skate edges have different names. As you look down at the skates you are wearing, observe the following:

- The edge to the outside of the right-foot blade is the **right outside edge.**
- The edge to the inside of the right-foot blade is the **right inside edge.**
- The edge to the outside of the left-foot blade is the **left outside edge.**
- The edge to the inside of the left-foot blade is the **left inside edge.**



Once you understand the effects of the edges, you will know that to make a curve to the **left** while skating forward, you must have your left outside edge or your right inside edge—or both of them—cutting into the ice.

To make a curving movement to the **right** while skating forward, you must have your right outside edge or your left inside edge—or both of them—cutting into the ice.

The Skating Leg and the Free Leg

The leg you are skating on is called the skating leg, while the leg that is removed from contact with the ice is called the *free* leg. We also refer to the skating foot and the skating hip as opposed to the free foot and the free hip.

As a general rule, the skating leg should be held in a flexed position, bending as the foot makes contact with the ice, and the free leg should be stretched as it leaves the ice. Keep this expression in mind: "When the skating leg bends, the free leg extends."

Safety Rules and Etiquette

A skating rink's safety and courtesy rules are designed to prevent accidents and make skating a fun and friendly experience for everyone.

If you fall, get up quickly and avoid touching the ice with your hands as much as possible. Serious accidents while skating are rare, but many accidents involve cut fingers.

If you find yourself about to fall, do not grab onto another skater. Instead, try to lower your arms and bend your knees. This lowers your center of gravity. Try to remain on two feet. If you fall backward, keep your hands and fingers facing forward as they make contact with the ice.

Safety Rules at Ice Rinks

Ice rinks post their safety rules on notice boards. Rules may include:

- No eating, drinking, or chewing gum on the ice.
- No playing tag, follow-the-leader, or crack-the-whip.
- No cutting across the path of other skaters.
- No speeding.
- No skating against the direction of skating traffic.

- No roughhousing or shouting.
- Limit skating while holding hands to three skaters.
- Skates may be worn off the ice only in those rink areas covered with protective flooring. Avoid carpeted areas and bare concrete unless using blade guards.

Don't drop anything on the ice that could cause another skater to trip and fall. If you do drop something, pick it up quickly.

Natural Ice and Ice Rescues

If you live in a place where rivers, ponds, and lakes ice over in the winter, you probably know that skating outdoors on natural ice presents many hazards.

Never go onto any ice-covered water while alone. A responsible adult should always accompany you. In case of an accident, an adult can either go for help or use the proper methods for rescuing people who have fallen through the ice.

Small bodies of water freeze more quickly than larger ones. The ice on a small site usually remains frozen longer and generally provides a smoother, better skating surface. Ice formed over swift water or where water depth rises and falls is always unsafe. Ice must freeze to a uniform thickness of 4 inches before it is safe for skating or walking.

Two general rules apply in all cases in which a person breaks through ice:

1. The person should not attempt to climb out immediately.
2. The person should kick the feet to the surface to the rear to avoid jackknifing the body beneath the ice rim.

After breaking through ice into freezing water, the person should extend the hands and arms forward on the unbroken surface, kick to a nearly level position, and attempt to work forward on the ice. If the ice breaks again, the victim should maintain the level position and begin to slide forward again.

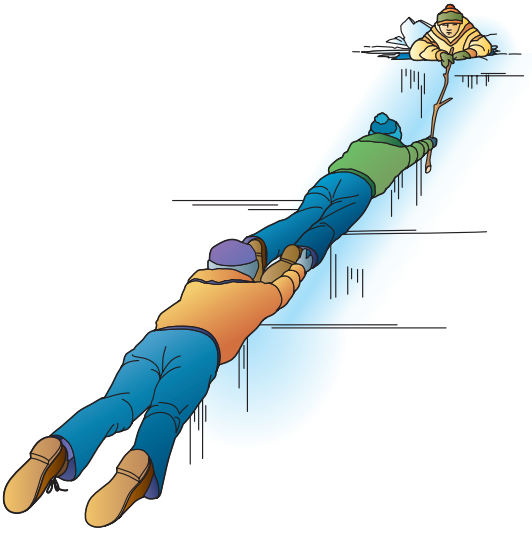
Upon reaching firm ice, the victim should not immediately stand, but should roll away from the break area. This position will distribute the weight over as broad an area as possible on the weak ice.

One of the most useful devices for ice rescue is a light ladder, from 14 to 18 feet long, with a light, strong line attached to the lowest rung. The ladder should be shoved out on the ice to the limit of its length with the line serving as an extension. If able to do so, the victim can climb onto the ladder and move along its length in a prone position.

For rescues in which the rescuer must remain at a distance from the victim because of ice conditions, a ring buoy with a line attached or a coiled line with a weighted end can be thrown to the victim. The buoy can be skidded along the ice over long distances.

A hockey stick also can be attached to a line and skidded along the ice. Sometimes a sturdy tree branch or board may be the only available device. A spare tire, preferably with a line attached, may be used for an extension rescue and will support several people. Also, a victim of an ice accident may be rescued by shoving a small flat-bottom boat along the ice and pulling the victim over the stern.

When no other rescue techniques are available, it may be necessary to form a human chain to attempt a rescue. To form this chain, several rescuers get as close to the victim as they safely can. They then lie prone on the ice, forming a chain. Each person holds tightly to the skates or ankles of the person ahead. If possible, the lightest person should be closest to the victim. When the lead person grasps the victim, the person nearest shore pulls the others back. If the ice breaks under the weight of the lead person in the chain, the individual can be held and drawn to safety by the others.



Skating Equipment

Newcomers to ice skating seldom understand the importance of a good fit and well-constructed boots. Traditionally, ice skating boots were made of leather. However, many modern skates are now made from composite materials that can provide more support and durability than natural leather. All skates should have these features:

- A double sole
- An inner lining made of natural or synthetic leather (not cloth or plastic)
- A padded tongue
- An inner and outer strengthening stay that runs up the back of the boot
- Eyelets and/or hooks

In addition, your ice skating boot should have a strong and durable counter. The counter is a stiffener built into the boot to support the ankle.

Figure skate

Blade Design

Three major factors go into skating blade design:

- Speed
- Maneuverability
- Strength

Unfortunately, it is impossible to combine all three factors into one blade. The thinner the blade, the faster it will move, but a thin blade is not as strong as a thicker one.

Blade designers must compromise, depending on the type of blades they want. To gain more maneuverability and strength, they sacrifice a certain amount of speed. To gain more speed, they sacrifice some strength and quite a bit of maneuverability.

The more a blade is rockered or curved, the more maneuverable it will be. However, it cannot provide the same speed that a flat, unrockered blade does, because a rockered blade makes less blade contact with the ice as you thrust against it.

Figure skates require strong blades that can withstand the landings of high-speed jumps. The blades must be exceptionally maneuverable. This is why figure blades are made thick for strength and are heavily rockered. They do not provide great speed, but speed is not of the greatest importance in figures, pair skating, and freestyle.

Hockey skates need strong blades to withstand impact from pucks, hockey sticks, and other players' skates. They need to provide extra speed but require only limited maneuverability, so hockey blades are thinner than figure skate blades. At the same time, hockey blades should be thick enough to withstand damage during the tough sport. They are rockered enough to offer limited maneuverability.

Speed skates are not subject to impact from other sources, so they do not need to be strong. They seldom are used for jumping (although barrel jumpers use speed skates). Speed skate blades can be made very thin to provide maximum speed. Speed blades have very little rocker—they do not need to be maneuverable, because speed skaters are not concerned with tight turns.

Figure Blade Design

Figure skating blades are all similar in design, but there are several types made for different purposes, including the following:

- General-purpose recreational figure skates
- Special skates for advanced jumps and spins (freestyle)
- Special skates for ice dancing

General-purpose recreational skate blade

Advanced freestyle skate blade
The toe picks are larger, there is a special jumping pick, and the side-honed blade has deep hollow-ground edges.

Ice dancing skate blade
The blade is thinner for high speed with minimum effort, and the shorter heel helps prevent tripping during intricate overlap footwork.

Hockey Blade Design

Hockey players need to move at high speeds—backward and forward—and to execute quick turns. Their blades are not designed to give the extreme maneuverability of figure skates. Skates used by hockey players need more ice lay, or contact with the ice, than figure skates.

Jumps, spins, and intricate footwork are not a big part of hockey, so hockey blades have no toe picks and are smoothly curved at the toe. The blades are thinner than figure blades, since a thinner blade permits greater speed. Still, hockey blades must be rugged enough to take hard impacts.

The hockey boot has a hardened top cap, interior padding, and a high, extended back to help prevent tendon damage. Although most hockey boots are made of leather, some manufacturers have introduced innovative, molded synthetic shell technology and offer removable inner linings. The hockey boot is similar in some ways to the modern ski boot.

Hockey boots

The Speed Skate

These skates are designed for fast-forward motion and possess little maneuverability. Since they are not subject to impact, they can be made with thin blades, which permit greater speed. These blades have a projecting nose, beyond the front of the foot, to permit a longer ice lay (contact). The blades have almost no rocker, so they are nearly flat against the surface of the ice.

Speed skate

Dry blades thoroughly after use.

Terry cloth covers come in handy for skate storage.

Caring for Your Boots and Blades

The leather used in figure, hockey, and speed skating boots must be kept clean and supple. Check the screws or rivets that attach the blades to the boots for tightness. Check the laces, and replace frayed laces promptly. Constantly check the blade edges for sharpness.

When you carry your skates, cover the blades with blade guards. When you wear your skates off the ice, use the guards to protect the floor and your blades. Never wear skates on cement. Remove the guards before storing your skates to prevent blemishes from forming on the metal.

After each use, thoroughly dry your skates (boots and blades) with a towel. This helps prevent the blade from rusting and the leather from deteriorating. When storing skates between uses, place each skate in a bag so that the blades do not hit each other.

When putting on or removing your skates, loosen the laces so your foot will enter and leave the boot easily. Tugging the boot off and on can stretch it out of shape.

A beginning skater does not need high-tech boots and special blades used by advanced skaters.

Buying Ice Skates

Rental skates are available at ice rinks and may save you money if you do not plan to pursue ice skating past the requirements of your merit badge. If you can afford the cost and plan to continue skating, it is best to own your own pair of skates.

Take a pair of thin wool socks with you to the store to try on skates. When you talk to a salesperson, be sure to describe accurately your present skating skills and how you plan to use your skates.

Ice Skating Skills

When learning to ice skate, extend your arms forward and sideways so your hands are at waist length with palms downward. It will feel like you are placing your hands wide apart on an invisible table in front of you. By keeping your hands in this position, you will balance more easily on the skates.

Keep your arms still, allowing a space between your upper arms and your body. Stand upright, not leaning forward. Keep your knees slightly flexed, not stiff or overly flexed. Keep your feet about 6 inches apart and almost parallel, but with your toes turned slightly outward.

With your feet still in this position, practice transferring your weight first onto one skate, then onto the other. Always keep your ankles close together, lifting one foot and then the other.

Alternating Pushes With Two-Footed Glides

After a minute or two of practicing weight transfers, stand with your heels together and toes turned outward in a V-position. Tilt the left skate inward slightly onto its inside edge, so it will grip the ice. Keep your back upright. Extend your arms at waist height, with your hands held palm downward. Slightly bend both knees and place your weight over the heel of your right foot.

Follow these steps:

Step 1—Apply sideways pressure on the left blade. This will cause the right skate to glide forward.

Step 2—Remove the left skate from the ice and bring the ankle of the left skate beside the ankle of the gliding right skate, allowing both skates to glide forward parallel to each other, with the blades vertical and upright.

Push off with the left foot, forward glide on the right foot, and follow up with the two-footed parallel glide.

Push off with the right foot, forward glide on the left foot, and follow up with the two-footed parallel glide.

Step 3—Now transfer your weight onto the heel section of the left skate and push sideways against the right skate's inside edge. This will cause the left skate to increase the forward motion.

Step 4—Remove the right skate from the ice and bring the ankle of the right skate close to the ankle of the gliding left skate, allowing both skates to glide forward parallel to each other.

Step 5—You will maintain some forward momentum at this point. Keeping both feet on the ice and parallel to each other, glide on two feet until your forward motion is nearly ended.

Step 6—Repeat what you have just done, but take four sideways pushes instead of only two. Always keep yourself balanced and in control of your motions.

Step 7—Remember after each sideways push to bring both feet together and parallel. Keep your arms still, because moving your arms disturbs your balance.

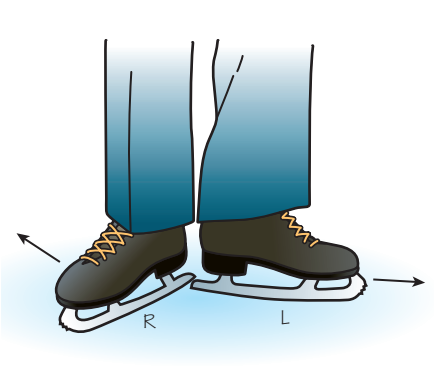
When you can do four sideways pushes and two-footed *glides* without losing stability or coordination, work on doing six in a row. Form is important. If you tend to push backward against the toe picks of the skates, do not increase the number of consecutive pushes yet. Practice properly. A few correctly executed pushes will get you on the right track and are worth 20 times that number in incorrect pushes.

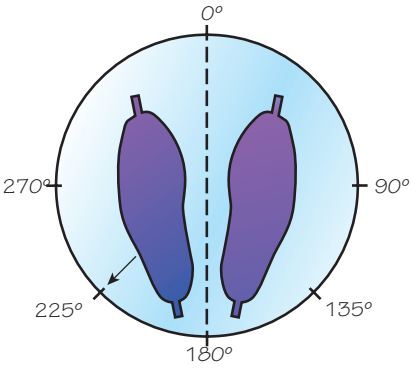
Always move gently. As you gain stability on your skates, keep increasing your number of consecutive pushes, from six to eight, then from eight to 10.

Learning to Stroke

You have made a sideways push and then immediately placed the pushing foot back onto the ice. You then glide on two feet before starting the next push with the other foot. When you can do six or eight consecutive pushes without difficulty, it is time to shorten the length of time or the distance you glide on two feet after each push.

Eliminating these rests between strokes increases your speed and calls for well-timed transfers of weight as you step onto each gliding foot. Make your initial pushes gentle and try only four or five before taking a rest and going into a two-footed glide.





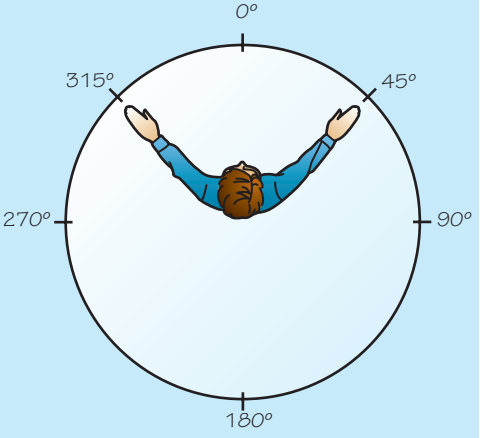
When stroking forward on ice skates, a sideways/backward push causes the inside edge of the pushing blade to cut down into the ice, forcing the blade of the other foot to move forward on a shallow outside edge. Never use the toe picks for pushing.

Constantly check to make sure you do not push backward against the toe picks and that your arms do not rise above waist level. Remember to keep your arms still and do not flail around. Also bring your feet together between each step. Do not let yourself develop a wide-legged stance.

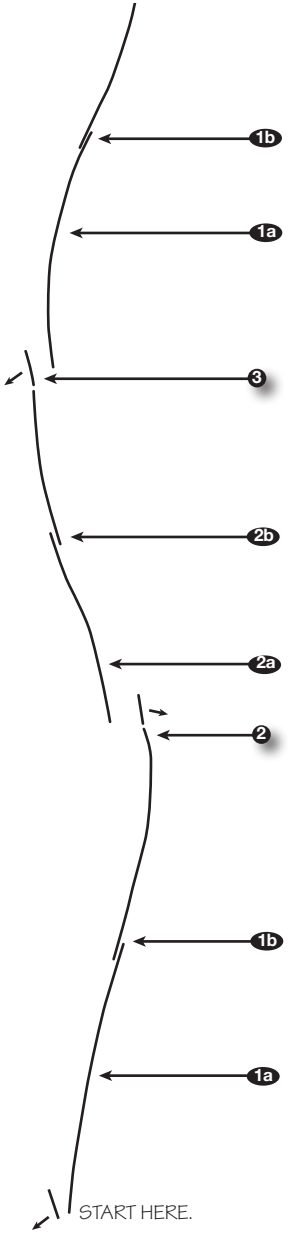
Learn to anticipate your transfers of weight. As you transfer your weight from one skate to the other, allow your weight to start moving over the next skate a little before it actually makes contact with the ice.

After you can accomplish 10 or 12 skating strokes without much trouble, concentrate on making your movements smooth, with your back upright, your arms steady, your skating leg well-flexed, and your free leg well-extended.

Excess speed at this point will only hurt your progress. Slower, steady, controlled skating will serve you much better during the early stages of learning.



Above is an aerial view of the proper position of the arms in relation to the head when the skater is moving forward. The arms should never be held farther back than 90/270 degrees. The hands should be held at waist height, with palms down, and fingers together and extended.



Forward skating does not create a pattern of straight lines on the ice. It actually creates a pattern of very shallow S-shaped curves. If you skate on perfectly clean ice, you should be able to see cuts on the ice that look like this illustration.

Step 1B repeats.

Step 1A repeats.

Step 3—The left foot, at the end of its glide, presses sideways to supply thrust.

Step 2B—The left-foot edge changes from the outside edge to the inside edge as the skater begins to transfer weight toward the right leg, before actually stepping onto the right leg.

Step 2A—The left-foot glide begins on the shallow outside edge of the left blade.

Step 2—The right foot, at the end of its glide, presses sideways to supply thrust, making a deeper cut into the ice.

Step 1B—The right-foot edge changes to the inside edge as the skater begins to transfer weight toward the left leg, before actually stepping onto the left leg.

Step 1A—The right-foot glide begins on the shallow outside edge of the right blade.

Step 1—The left blade presses downward and sideways against the ice to supply thrust.

Points to Remember

Always

- Keep your arms still.
- Keep your hands at waist height.
- Place your weight on the heel of the new skating foot as you step onto it (when skating forward).
- Push to the side, against the blade.
- Maintain a straight back.
- Bring the legs together between strokes.

Never

- Push backward using the toe picks.
- Take a step without first placing your weight onto the skate.
- Allow the free foot to rise more than 2 to 3 inches above the ice.
- Skate with your hands in your pockets.
- Raise your arms if you begin to lose balance.
- Impede the flow of skate traffic; get up quickly if you fall.

The Two-Footed Snowplow Stop

If you want to *stop* while skating, follow these easy steps:

Step 1—Glide forward on two feet. Keep your feet parallel and 12 inches apart. Your back should be straight. Keep your arms extended sideways and slightly forward, hands at waist level. Bend both knees while continuing to glide forward *in a straight line.*

Step 2—Push the heels of both skates outward at the same time, against very shallow inside edges of both blades. This causes both sets of toes to turn inward toward each other and both feet to incline inward slightly.

Step 3—Apply pressure downward and sideways against both heels and blades, causing the blades to start a skidding action on the ice. Keep your back upright (although as you first slow down, you will tend to lean forward). Keep both knees bent throughout.

Step 4—Allow the skid to continue slowing until you eventually reach a complete stop without body movement. Do not move your arms from their extended position until three or four seconds after you stop. You should travel straight forward throughout the entire maneuver.

Notice the extended arms, straight back, and bent knees. When making a two-footed snowplow stop, start from a two-footed glide in a straight line forward. The blades' skidding action kicks in as the heels are forced outward on the inside edges and the toes turn inward.

The One-Footed Snowplow Stop

Once you get the hang of the two-footed snowplow stop, try a one-footed snowplow. Follow these steps:

Step 1—Glide forward on two feet. Keep your feet parallel and 12 inches apart. Your back should be straight. Extend your arms sideways and slightly forward, hands at waist level. Bend both knees while continuing to glide forward *in a straight line,* both blades vertical to the ice.

Step 2—While continuing the forward two-footed glide, transfer your weight onto your left foot. Although both skates continue to touch the ice, the greater part of your weight is now over your left foot.

Step 3—Keep the left blade quite vertical, so it continues to ride in a perfectly straight line. Allow both knees to increase their bend while you turn your right blade inward, onto its inside edge. Remember, there should be almost no weight on the right blade. The right toes should now be turned inward while the right heel is pushed outward.

Step 4—Gradually transfer weight from the left foot onto the right foot, making sure the left foot continues to ride in a straight line and the right foot continues to be turned toes-inward. As you transfer the weight, press downward and sideways against the right heel to make the blade of the right skate begin a skidding action on the ice.

Step 5—As you increase the skid with the right foot, let your left arm move forward until it is fully extended, with your left hand directly in front of your stomach. Let your right arm travel backward, fully extended, to end up pointing slightly backward.

As you finish a one-footed snowplow stop, turn the right blade inward and skid against its inside edge.

Step 6—While skidding with the turned-inward right foot, be sure your left foot continues to be upright, traveling over the ice in a straight line. Keep your back upright throughout the entire maneuver, but allow your left knee to bend freely as you continue the skidding action of the right blade.

Step 7—Continue the skid until you come to a complete stop. Do not allow your arms to move from their extended position until three or four seconds after you have stopped.

Forward Right-Foot Glide

Skate forward to gain a fair amount of speed. Interrupt your pushes and glide forward on both feet, keeping the blades upright while traveling in a straight line. Your feet should be about 12 inches apart. Keep your arms still, your back upright, your knees slightly bent, and your shoulders level.

Without removing your left foot from the ice, transfer your weight to your right foot, making sure you continue moving in a straight line.

Gently allow your left foot to travel forward in a straight line and lift it until it is no more than 3 inches off the ice. Keep your thighs close together and make sure the right blade remains upright, traveling straight. Carefully balance, allowing your right foot to continue onward, slightly increasing the bend of your right knee. See how far you can travel in a straight line.

Forward Left-Foot Glide

Start the maneuver again from the beginning. Gain speed, make a two-footed glide, and gently transfer weight onto your left foot without taking your right foot from the ice. Once you transfer your weight, carefully move your right foot forward until it comes off the ice, allowing it to rise no more than 3 inches above the ice's surface. Make sure you skate in a straight line throughout the entire maneuver. Keep your back straight and your arms extended.

T position

Stroking

Stroking From a T Position

For requirement 2b, you should start from a T position and stroke forward. In the T position, your front foot points straight forward. Your back foot is turned outward with the instep against the heel of the front foot. Now you are ready to push off with the back foot and glide forward on the front skate.

Remember to avoid the use of toe picks if wearing figure skates as you complete this maneuver. Your counselor will be looking for good style and coordination rather than speed. You should try to avoid toe-pushing and double-tracking (resting on two feet between alternating pushes).

The skating leg should bend each time you step onto a foot, and the free leg should extend each time you remove it from the ice. Do not look down at the ice. Keep your back upright, and keep your arms controlled, extended, and waist high.

When you skate around corners, lean into the curve, extending your outside arm forward so your hand is in front of your stomach. The inside arm and shoulder should be pulled horizontally backward. During the merit badge review, you may skate around curves on two feet, or by stroking, or by performing forward crossovers.

Two-footed backward glide

Gliding Backward

You may choose your own method of gaining speed in a backward direction before starting your glide on two feet.

With the **scissors method,** you keep both blades on the ice. With your skate toes together and heels angled out 45 degrees apart, use side pressure on the inside of each skate to force your feet apart to a distance roughly equal to your shoulder width.

At this point, with continued pressure on the inside of your skates, your heels should turn inward until they are about 3 inches apart. Then the blades run parallel. Repeat this movement, heels going out and then pulling back in, with a continuous, unhurried, rhythmic action.

When you skate backward, you place your weight over the ball of each foot (in forward skating, it is over the heel of the foot.) Keep your back straight, bending your knees slightly. Hold your hands at waist height, palms down. Your wrists should not droop. Do not twist your head to see where you are going. That will cause your body to turn, and you may lose your balance. Arrange for a friend to skate in front of you, to warn you if you are skating too close to other skaters or the rink fence. Resist the tendency to bend forward to look at your skates.

Some skating professionals prefer that skaters lift each skate off the ice separately when moving backward, just as in forward skating. Each backward step begins on an outside edge rather than an inside edge.

Once you gain speed, bring both skates to a parallel position about 12 inches apart, with the blades running upright and your weight on the ball of each foot. Bend your knees slightly, and keep your arms still and extended and your back upright. The blades should run in a straight line backward.

Requirement 2c asks you to glide backward on two feet for at least two times your height. Practice building up enough speed to sustain the glide.

Skating Backward

You must also skate backward for at least 20 feet using both feet. If you use the scissors method for skating backward, try to progress to the higher level of skill in which you lift each skate off the ice separately. To do this, you must transfer your weight onto each foot in turn as it contacts the ice.

First experiment with transferring your weight. Stand with your toes touching and your heels about 8 inches apart. Without moving from where you are, lift one foot from the ice and put it down. Then lift the other foot and put it down. Make sure your toes remain close together and your heels apart, so you are pigeon-toed. Whenever you place a foot on the ice, let the outside edge of your blade touch the ice by slightly angling your foot outward. Do not look down, keep your back upright, and keep your arms extended and still.

Even though you may not be attempting to move backward while you experiment with transfers of weight, a backward movement will probably start by itself. Allow the movement to progress. Before placing a skate on the ice, make sure you place the toes of your skates close together to avoid any tendency for your legs to move wider apart. Stay pigeon-toed. Make four separate steps backward and then allow both blades to run on the ice to stabilize your balance and slow you down.

Go back to the pigeon-toed position. Keep your toes together and your back upright. Transfer weight from foot to foot as you step onto the ice for six steps before resting on two feet. Increase the number of steps you can take. Once you can take 10 successive steps, you will progress rapidly to double that number.

Skating backward

Glide and Turn

Skating forward on two feet in a curving arc is sometimes called a *hockey glide* because hockey players use this maneuver.

Follow these steps for the **left hockey glide.**

Step 1—Gain adequate speed and then interrupt your skating strokes to rest on two feet in a straightforward two-footed glide.

Step 2—To curve to the left, slide the left foot forward, keeping it parallel to the right foot and one boot length ahead of the right boot. Roll the left foot outward so a firm cut is made into the ice with the outside edge of the left skate blade.

Step 3—At the same time, lean to the left, rotating your upper body with a firm, strong movement. Allow both arms to rotate to the left, so your left arm is fully extended behind you and your right arm is fully extended in front of your stomach.

Step 4—Keep your feet parallel, the left foot in front of the right. Do not twist the left *(leading)* foot to the left. This will cause the left foot to jar and possibly to skid.

Step 5—Do not lean out of the curve—lean inward. And remember, the whole upper body must rotate, not just the arms.

Step 6—To come out of the curve and resume movement in a straight line, straighten up from your lean and let your arms return to their normal position, extended to the sides of the body. Straighten your blades so they are vertical to the ice.

Follow the steps below for the **right hockey glide.** After performing your hockey glide to the left for 180 degrees around a cone placed on the ice, you will perform it to the right.

Step 1—First, gain speed skating forward, then interrupt your stroking to go into a straight two-footed glide.

Step 2—Push your right foot forward one boot length in front of the left boot, keeping both feet parallel.

Step 3—Just before you reach the cone, drop the right boot over so the outside edge of the right blade cuts firmly into the ice. Lean to the right, and allow the upper body and both arms to rotate strongly to the right.

Step 4—Maintain that position throughout the 180-degree curve around the cone and then straighten up. Let both blades run in a vertical position.

Step 5—Bring your arms and body to the normal forward-skating position as you resume movement in a straight line.

Crossovers: The Figure Eight

The crossover teaches you how to skate a curving path, for instance, around the end of an ice rink. Crossovers involve skating around the circle, making normal strokes onto the outside edge of the skate that is on the inside of the circle, then crossing the outer skate around the front of the inner skate and placing the outer skate on the ice on its inside edge. The term "crossover" is not accurate because the foot does not cross over the inner foot; it crosses in front of it.

You should learn forward crossovers in circles about 25 feet in diameter. To make a forward crossover in a counterclockwise circle:

Step 1—Rotate the upper part of your body toward the inside of the circle. At the same time, rotate both arms firmly to the left, so your left arm is extended behind you and your right arm is extended in front of your stomach. Your palms should face downward, and your wrists should not droop.

Step 2—Pushing sideways against the right blade, step with your left foot, leaning into the circle so the left blade is on its outside edge as it rides over the ice. Keep your arms and hands in their correct positions. Do not let them move.

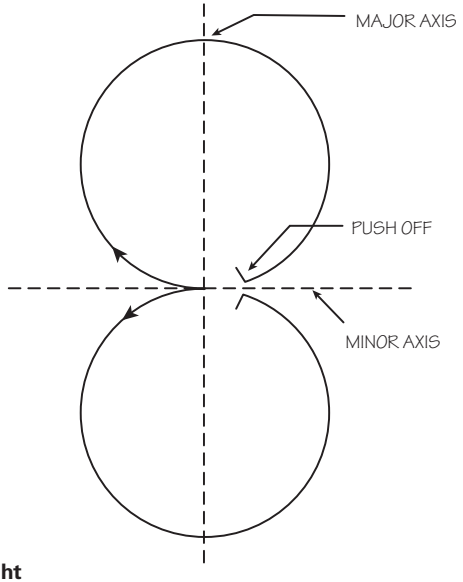


Figure eight

Step 3—As your right foot leaves the ice, take it around the front of your left skate, keeping the blade not more than an inch or two above ice level. Take it so far around the left foot that the calf of the right touches the shin of the left leg. When it is fully around, step down onto the right inside edge.

Step 4—As you step onto the right skate, lift the left foot from the ice, toes first. Keep the heel no more than an inch or two above the ice. This prevents the left toe picks from digging into the ice and greatly enhances the appearance of the maneuver.

Step 5—Do not let the left blade rise more than an inch or two above the ice level. Bring your left foot around the rear of your right foot until your left foot is parallel and very close to your right foot. Then step onto your left foot, pushing sideways against the right blade to supply thrust.

Forward crossover (right foot around left)

Repeat the sequence of movements. If you lose coordination, run on a curving two-footed glide for a while to restore your balance, then try it again. At first, you may find it difficult to perform more than two or three consecutive crossovers.

After a little practice, you will be able to make several crossovers, but you may be toe-pushing. Resist toe-pushes when doing crossovers because the habit is hard to break.

When you can successfully perform **crossovers** in a counterclockwise direction, learn to do them in a **clockwise direction.** When skating around a circle to the right, lean to the right, rotate the body and arms fully to the right, and allow the left foot to make the crossing process.

When you can crossover in each direction, practice in a figure-eight pattern, first completing a full circle counterclockwise and then changing direction into a full circle clockwise. When making the change of direction, you may simply glide on two feet forward before changing your lean and your body and arm positions as you start skating into the new circle.

Forward crossovers are among the most important basic skating skills. It is important to perform them equally well in each direction. Most skaters find it easier to learn them counterclockwise, because in most rinks the public skating sessions are run in a counterclockwise direction.

Racing on Ice

Racing is a lot of fun, but safety always comes first. It is best to run the race on an oval track rather than just racing down the center of a rink where you may be faced with a solid wall just when you are reaching maximum speed. On an oval course, the finish line should be about one-third of the distance along one of the long sides of the oval. Plenty of ice space is then available for slowing down as you cross the finish line.

Racing skaters should wear gloves to protect their hands and fingers from other skaters' blades in the event of spills. Rules such as no pushing should be established. Skaters should be warned that if they fall, they should immediately get onto their feet again.

Hockey Stop

The hockey stop is one of the best ways to stop quickly when you are skating forward. For requirement 3d, you will make a complete stop using both feet in a skidding action. The hockey stop must be performed in a straight line. Practice slowly at first.

Step 1—Stroke forward to build up some speed, then glide on two feet.

Step 2—Bring your feet close together, bend your knees, and turn your feet crosswise (90 degrees) to your direction of travel. Meanwhile, your shoulders should face the line of travel.

Step 3—At the same time, lean back slightly. This puts your front skate on its inside edge and your back skate on its outside edge. The result is a skidding action that brings you to a stop.

Step 4—Keep your feet parallel. Your head, shoulders, and torso should be parallel to your feet at the conclusion of the hockey stop.

Step 5—Bend your knees more deeply to produce a faster stop.

Roller Skating

Tips for the Beginner

If you learn the correct fundamentals of roller skating from the start, you will avoid bad habits that are hard to break. Check into skating classes at your local rink. Taking lessons from a skilled skating instructor can benefit you greatly in the long run.

Skate—Do Not Walk

Speaking of bad habits, do not walk on roller skates. A walking movement serves only to send your leading foot out in front of your body, pitching your body weight forward. The result is your supporting skate slides out behind you.

To learn the correct method, visualize one skate as the carrier of your body. You propel yourself forward with a slight push from your other leg.

Follow-Through

Follow-through is as important for skaters as it is for baseball players, golfers, and other athletes. Devote some time and attention to learning this concept.

The most efficient pushing stroke on roller skates begins with your body upright, knees slightly bent, and skates underneath the body and parallel.

Step 1—Put your weight on the pushing skate and begin the push out to the side and back, using pressure on the inside of the pushing skate. This propels the carrying skate forward. Use the entire leg in the pushing movement, not merely the lower leg.

Proper follow-through helps ensure smooth, steady skating.

Step 2—Keep the pushing skate on the floor with enough body weight on it to ensure the longest possible push. The pushing skate should be in contact with the skating surface as long as possible.

Step 3—Gradually transfer your body weight to the carrying skate as you leave the pushing skate behind. You will glide forward with your weight on the carrying leg, which is called the **skating leg.**

Step 4—Keep your pushing foot on the surface until your knee straightens and the foot flows off the floor into a carried position. Once your pushing leg is clear of the skating surface, it becomes your **free leg** or balance leg. (Do not use a kicking motion as you lift it from the skating surface, since this deprives you of a full push.)

Step 5—When your free leg becomes the carrier, the knee bends and the skate glides forward alongside the other skate. Repeat the process.



The scissors movement trains you to support your body while in motion, and you gain valuable experience in using side push movement.

Forward Scissors Movement

A new skater can keep both skates in contact with the skating surface while learning to skate forward by using the scissors movement.

Step 1—Balance evenly over the centers of both skates. Maintain a firm upright body carriage.

Step 2—Keeping your toes straight, bend both knees slightly by dropping them forward toward the toes (but avoid a sitting position).

Step 3—With your heels together and toes angled about 45 degrees apart, use sideways pressure on the inside of each skate to force the feet to a shoulder distance apart.

Step 4—At this point, pull the skates in again, with pressure to the inside of the skates and toes turned inward (pigeon-toed).

Step 5—The skates should pull back together until they are roughly 2 inches apart. Repeat this movement (out and in), with continuous, unhurried action.

Aiming the Skates

The curved path that results from proper body lean is called an *edge.* This is the way all good skaters travel around the rink, in a counterclockwise direction.

When a skater leans away from the free leg, the skating foot is on an **outside edge.** A body lean toward the free-leg side puts the skater on an **inside edge.**

As you skate around the ends of the rink, leaning in the direction of the floor's center, your skates follow a constant arc. This is the result of the left outside forward edges and right inside forward edges.

Safety Rules and Etiquette

As long as you are thoughtful and courteous, you will find the roller rink an easy place to make friends and increase your skating skills. Learn the house rules.

Fast skating, weaving suddenly in and out of the normal flow of skating traffic, uncontrolled skating movements, and trick skating are usually forbidden because these activities endanger other skaters.

Your maximum speed should be the average speed of skaters at the rink. Any skater who consistently passes more skaters than pass him or her is skating too fast.

Rink Rules

Each roller rink has rules posted, so read them before skating. Some typical rules include the following:

- No speed skating during public skating sessions.
- No tag or follow-the-leader.
- No crack-the-whip.
- No roughhousing of any kind.
- No eating or drinking while on the skating surface.

Equipment and Care of Skates

Shake each skate. Are there any rattles? Does anything feel loose? If so, investigate and have the trouble corrected. A loose wheel or skate assembly can separate from your skate, causing a spill.

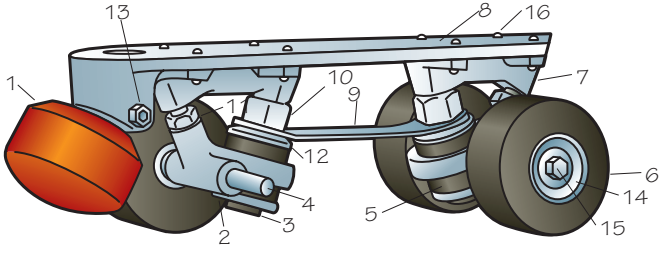
Check to see if your boots are properly laced and securely tied. A loose bootlace can get into your wheels and cause an accident.

Skate Parts and Functions of Skates

The rubber cushion assembly on the bottom of a roller skate allows the skate to be steered through side pressure on the wheels. This lets you skate forward, skate backward, and turn.

Parts of a boot

1. TONGUE
2. EYELETS
3. LACES
4. SOLE
5. HEEL

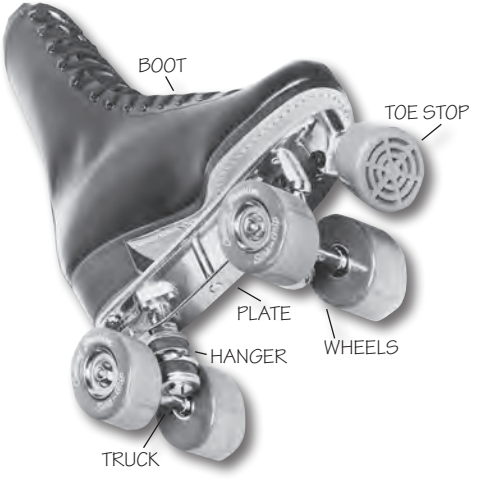


Parts of a roller skate

1. TOE STOP
2. TRUCK
3. KING PIN
4. AXLE
5. CUSHIONS
6. WHEELS
   (A) LOOSE BALL BEARING
   (B) PRECISION BEARING
7. HANGER
8. PLATE
9. JUMP BAR
10. HEX NUT
11. PIVOT PIN
12. RETAINER CAP
13. ALLEN SCREW
14. DUST CAP
15. AXLE NUT
16. RIVET

Equipment

Rental shoe skates are available at the roller rink. If you plan to take lessons and are sure you want to keep skating long enough to justify the expense, it is best to purchase your own skates.



You must have a well-fitted skate to become a good skater. Buy the best skate you can afford, and buy from people who are experienced in the business of roller skating.

If your budget is limited, check local shops and rinks for posted notices about used skates for sale. Your parent can help you make wise decisions when purchasing skates and other equipment.

Care of Skates

- No skate should ever be used before it is oiled or lubricated. Ball-bearing skates are oiled. A drop of oil in the *bearings,* on each side of each wheel, should last for 10 wearings. Precision skates are lubricated with a special lubricant, and this work should be done by a rink mechanic every six months.
- Use a leather softener and preserver on your boots every six months. Polish the boots regularly to preserve them and enhance their appearance.
- When removing your skates, unlace them until they slip off easily. Put laces inside for storage. Tugging on your boot when you put it on or remove it will stretch the boot out of shape.
- Before you skate, make sure all nuts are on tight, especially the wheel nuts.
- Do not let toe stops wear down to the point where the metal parts or nails cut up the floor.

Roller Skating Skills

Learning these skills will help you progress from a beginner to a polished, confident, and safe skater.

Skating Forward: How to Start

Most skating strokes start from the same position—the **T position**. You start with your feet close together, with the right skate placed behind the left heel, as shown.

How to start

You transfer your weight to your left skate as you push with your right skate, which moves to the rear. At the end of a comfortable distance of travel, give a push with the big toe. This move usually maintains enough momentum until you can take the next stroke.

The pushing right foot returns to the parallel position, and the left foot then moves to the rear with the next push.

Practice forward skating in both directions around the rink. Also practice skating forward and gliding on one skate, then on the other skate.

Forward skating—foot moves to the rear of the body

How to Stop

Stopping on skates is simple to learn, but you should use caution at first. The **T stop** uses the wheels as a source of friction.

Step 1—Stand still with the right skate placed behind the heel of the left one in a T position.

Step 2—Keeping the body upright, bend both knees slightly and push off easily onto the left skate. Maintain firm support of your upper body.

Step 3—Return the right skate to the T position but off the floor, pressing the middle of the skate into the heel of the left.

Step 4—*Gradually* lower the right skate onto the skating surface,

How to stop

keeping the skates pressed together. *Slowly* transfer your body weight to the right skate. The friction of the right skate on the skating surface is the braking factor, since the wheels are not in a position to roll.

There are several variations on this stopping method, all of them using slide friction. You will notice a tendency to lunge forward while stopping. Try to resist by supporting your body with a firm back and leaning slightly away from your direction of travel until your skates come to a halt.

The stopping action should be gradual and controlled, not quick. If you try to stop suddenly, the top part of your body will pitch forward.

The buddy system

Skating Backward

Skating backward is a neat skill to learn as a beginner. Once you can skate forward with poise and coordination, you will have no problem learning to skate backward.

Use a buddy system when you start backward skating. Have a friend stand in front of you and skate forward, supporting you by placing his or her hands under your elbows. Rest your forearms on top of your friend's arms. After you master skating backward on two feet, practice skating backward on one foot.

USING THE SCISSORS

Using a scissors technique is once again the best way to start in this new direction. Stand erect, without bending forward at the waist. Balance your weight evenly over the center of both skates. Resist the natural tendency to look down and watch your skate movements.

The main difference in forward and backward scissors is that the toe-in positions are reversed.

Step 1—Begin the movement with toes inward (pigeon-toed).

Step 2—Drive the skates apart about shoulder width and then bring them together with the heels leading inward.

Step 3—Maintain pressure to the inside of both skates. Action should be unhurried but continuous.

ONE-FOOT STROKING

Once you master the backward scissors movement, it is a simple matter to convert to one-foot stroking, using a side pressure push to the front of the body.

Step 1—While gliding backward, bring your feet together and parallel.

Step 2—Shift the weight of one foot and let the other foot travel to the front of the body.

Step 3—After a short distance, give a push with the big toe of your front foot to continue motion, then return your foot to the parallel position.

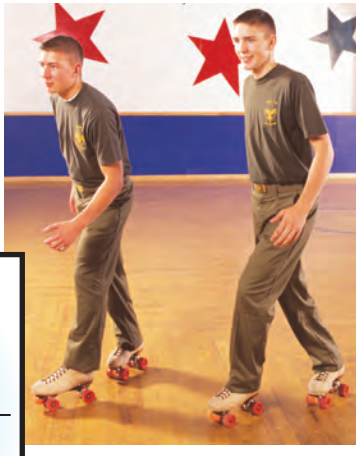
Step 4—Repeat the backward stroke with the other foot. The photo shows how your foot moves in front of your body.

Crosscutting on Skates

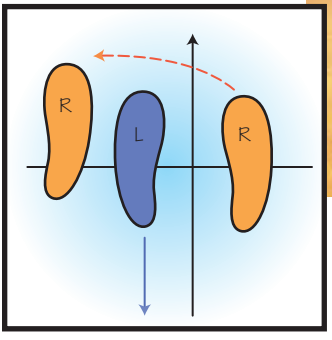
When done properly, crosscutting is a smooth and graceful skating move.

The picture shows two Scouts doing the left cross in front stroke. The diagram shows the right cross in front stroke. Study it carefully so you can repeat this movement to both left and right.

How to Do It. With your left foot parallel, lift the right foot and place it on the floor to the left of the left foot and slightly in front. Move the left foot to the rear and raise it from the floor. Continue crossing in front by placing the left foot to the right of the right foot.



Left cross in front



Right cross in front

Skating a Slalom Pattern

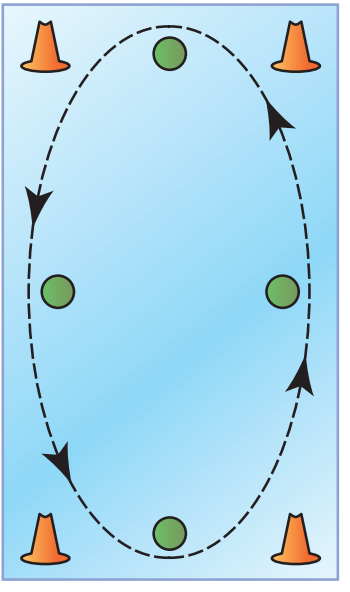
The illustration shows how to skate the slalom pattern. This is a serpentine movement, following a course that is laid out on the skating surface. Try it first by skating on both feet, with skates parallel. After you master skating slalom style on two feet, practice lifting one foot and keeping within the markers on the floor.

Skating the Slalom Backward. While skating backward on two feet, skate a slalom pattern as shown in the illustration. Advanced skaters can try this on one foot, then on the other foot.

Shuttle Skating

In this test of skill, you skate at varying speeds around the rink and maintain balance while bending over to pick up an object from the rink floor.

Four blocks or similar objects are placed on the rink surface, one at each corner. Four containers are spaced at equal distances away from the blocks. You must skate around the rink and pick up each container and deposit it in the next container.



Shuttle skating and the shuttle rink pattern

The Widespread Eagle

The widespread eagle is a basic position in skating that leads to doing two-footed turns properly. The position is shown in the picture: the right skate traveling forward, the left backward. After accomplishing this position, the skater gradually brings the feet closer together until the heels are touching. This is the basic position for several fundamental turns in skating.

Mohawk

You can use this turn to change from forward skating to backward skating. You will still be traveling in the same direction when you complete the turn. The *mohawk* uses a variation of the widespread eagle.

Begin by skating forward on the left foot. Turn your shoulders and hips in the direction you want to turn, and place your free right foot on the floor in the direction of backward skating. Lastly, pick up the left foot and either hold it to the rear or place it alongside the right foot, which is now gliding backward. You are ready to take the next stroke.

Turning from backward skating to frontward skating uses the same technique, but reversed.

Spinning on Skates

You can perform a wide variety of spins on roller skates. One of the easiest to learn is the heel-and-toe spin. Begin by standing upright with your skates under your body, aligned about 3 to 4 inches apart.

Extend your arms to the side, straight out from the shoulders. Take a deep breath to raise your rib cage. Straighten your back, look forward (not down), and hold the body straight without stiffness.

The remaining instructions assume you are right-handed. If you are left-handed, change *left* and *right* in the instructions.

Step 1—Without raising any wheels from the skating surface, apply pressure to the front set of wheels on the left skate and rear wheels on the right.

Step 2—While not allowing the lower body or skates to move, slowly rotate your upper body, shoulders, and arms clockwise (right) to a "cocked" position, preliminary to triggering your spin.

Step 3—With upper body unity, start the spin by snapping your arms and torso into a counterclockwise direction (right to left), permitting the lower body and skates to follow. Keep pressure on the right-heel and left-toe wheels of your skates.

Balance is critical to spinning. Retain your upright body position throughout. Your first attempts should be taken slowly and carefully, with only one or two turns until you develop greater skill through practice. Drawing your arms slowly inward toward your body will increase spinning speed.

Hop

Skip

Hop, Skip, and Jump on Skates

This is a three-part requirement. The first part of the hop consists of hopping on one foot a short distance above the floor.

The second part is also known as a *bunny hop.* It consists of digging one skate, or pushing the skate toe sharply into the floor, and hopping to the other skate.

The third part of this requirement is the jump. It is often called the *waltz jump.* The jump consists of taking off from one foot, turning the body while in the air, and landing on the other foot in the opposite direction from which the takeoff was made.

Jump

Racing on a Speed Track

Speed skating or racing is one of the coolest parts of roller skating. Racing should be done only under highly controlled conditions. As in all sports where speed is the object, high speed limits a person's ability to change directions or stop to avoid a collision with an obstacle or another skater.

Scouts must never go fast when other skaters are in the rink at the same time. Speed skating and racing are generally done in rinks at times set aside for that purpose only.

Using the skills you have learned so far will help you practice the techniques and rules of speed skating. With help from your counselor, you will be able to demonstrate correct technique in starting, cornering, passing, and pacing.

The first picture shows two Scouts on the starting line ready to take off in a race. The second photo shows them rounding a pylon or corner in the proper way.

Shoot-the-Duck

The photos here show the steps you take in learning to shoot-the-duck.

Step 1—First, use fast stroking to build up some speed.

Step 2—Bend over and touch your toes.

Step 3—Bend down in a squatting position, with your hands extended directly forward.

Step 4—Extend one leg out in front, assisting by placing your hands under the knee of your extended leg.

Step 5—When you are nearly stopped, rise into an upright position by reversing the procedure. After some practice, you should be able to rise while on one foot.

You also can learn to skate in a slalom pattern while in the shoot-the-duck position. You can also shoot-the-duck while skating backward, but use extreme care to avoid collisions.

Limbo Under

The picture shows the entire procedure that will make you a limbo champ. While skating forward, the skater leans back and skates under a bar; the lower the bar, the more skilled the limbo skater. If you can shoot-the-duck, you will be able to pass under a lower bar.

The Stepover

For the roller skating requirement 2e, you will need to perform the stepover, shown here. Note how the skater slowly steps over the bar.

Dribbling a Basketball

For this requirement, you should be able to dribble the ball the length of the floor while skating, turn around, and come back to your starting point. This also can be done in teams.

Hockey Puck on Skates

Practice skating completely around the rink, using a hockey stick to push a puck in front of you. Pushing too hard will lessen your control. Skate at an even speed and push the puck smoothly. This will keep the puck from getting away from you.

In-Line Skating

Tips for the Beginner

In-line skating is a skill you can learn without injuring yourself as long as you pay close attention to learning the basics.

If you have never been on skates before, it is a good idea to start out on a soft, level surface like dry grass or even the carpet inside your home.

First, sit on a sturdy surface and put on your safety gear and skates. Always wear your safety gear, no matter where you are skating. Sitting on the edge of your seat, position your skates with toes out, heels touching. This is called the **V-stance.**

Holding onto the chair, rise in one smooth motion and center your hips over your heels. While you do the next exercise, keep your head up and facing forward. Get used to the feel of the skates underneath you without looking down at them.

V-stance

In-line Skating Positions

Next, you will assume the **ready position.** Place your feet shoulder-width apart, and raise your hands to waist level. Slightly bend your hips, knees, and ankles. You will go down a few inches when you do this. Imagine a line connecting your shoulders, hips, and ankles. Keep your weight distributed this way, and you will be much less likely to fall.

Ready position (front)

Ready position (side)

Tip: Whenever you are on in-line skates, keep your pelvis tucked and your knees bent. In this position you are ready to react in different situations.

In the ready position, test the way your body moves. Lean forward and backward, remembering to keep your knees bent. Try sinking several inches and rising up again a few times. Notice how the pressure changes with your body movements?

Bend your knees carefully until you can touch them—then go ahead and touch your toes. See how easy it is to move around in your skates? Tip the skate wheels to the right and then to the left to gain confidence in the support in-line skates offer.

Now stand with your skates a little more than shoulder distance apart. This is known as the **A-frame stance.** Practice tipping your skates inward, then return to the normal A-frame stance. Do the same thing again, except tip the skates outward. In the A-frame stance, put your toes as close together as possible without hurting and heels out. This is known as the **A-stance.**

A-stance

To stand still, use the **safe-T.** Roll the skate without the brake back until it touches the arch of the other skate, making a T-shape. Practice this until you feel securely anchored in the safe-T.

Safe-T

How to Fall Down and Get Back Up

Falling Down. With good skating skills and the proper attitude toward safety and taking care of your equipment, falling should not be a problem. But if you feel a fall coming, try to fall forward—so your wrist guards, elbow guards, and knee pads provide you some protection.

Getting Up. If you do end up on the ground, here is the best way to get up:

Step 1—Get on hands and knees.

Step 2—Raise one knee and put that skate on the ground close to your other knee.

Step 3—Keeping your upper body upright, sit on the heel of the other skate. Center yourself directly over both skates, so your skates do not roll out from under you.

Step 4—Use your hands on the raised knee to push yourself straight up in one smooth motion.

Getting up

V-Walk or Duck Walk

This exercise will help you get a feel for the inside wheel edges. It is also the next step you take toward skating.

Step 1—Put your toes out, heels touching.

Step 2—Lift one skate at a time, stepping in place and shifting your weight right, then left, and so on.

Step 3—Now advance each skate a few inches ahead as you step and shift your weight. With your feet still in the V-stance, you will waddle like a duck.

Crab Walk

This step will help you gain confidence on skates. You also will use it later to perform crossovers. The effect you should try to achieve here is walking your skates to the left while facing forward. You will repeat the walk to the right.

Step 1—Stand in the ready position. If possible, find a line to stand on. Stand on the line so it is passing from your left to right (not between the skates).

Step 2—With your arms raised in the ready position, look toward the left and rotate your shoulders in that direction.

Crab walk

Step 3—Pass the right skate over the left skate and place it back on the line, on the other side of the left skate. Let your left ankle completely relax onto its left side to give your right foot plenty of room.

Step 4—Bring the left skate from behind the right and place it in its natural place to the left of the right foot on the line.

Step 5—Keep walking down the line to the left until you are comfortable with the crab walk.

Step 6—Practice these same steps to the right until you are back at your original position.

The Glide

Now try skating on dry grass or carpet. Practice by repeating again and again.

Step 1—Put your feet in the safe-T position.

Step 2—Tip the back skate onto the inside edge and push against that edge.

Step 3—Lean your upper body over the knee of the front skate and *lunge* forward over that knee.

Step 4—When your weight transfers to the front skate, pick up the back skate and move it forward, closing the gap between the skates.

Safety Rules and Etiquette

Take safety seriously. Control your own safety by always using protective gear and properly functioning skates, knowing and practicing good in-line skating skills, and having a safe, courteous attitude.

Skating Smart

One requirement for the Skating merit badge is to explain skating safety rules. You must also know how to safely pass a pedestrian. All safety rules fall under skating etiquette, which is really just common sense.

- Always be in control of your skates and maintain a safe skating attitude. Do not show off.
- Stay on the right side of the path. Always pass on the left, and always call out a warning, "Passing on your left!"
- Skate with the flow of traffic.
- Do not wear headphones.
- Legally, you are a wheeled vehicle on in-line skates. Learn and observe all traffic regulations. Remember to always yield to pedestrians.
- Stay away from anything on the road surface, such as water, oil, and rocks. These make an unsafe skating surface and can damage your skates and send you flying.
- Avoid heavy traffic.
- Take care where you skate alone. Do not leave yourself open to danger by skating in run-down areas after dark.

- If you do skate after dark, make sure your equipment and skates are well-covered with reflective materials that show up in the dark. It is a good idea to apply reflective material when you first begin to skate because you never know when you might stay out later than you had planned.
- Skate only where you know you are welcome. If you are skating in a park, make sure the park allows in-line skating and you are skating in an area that is not off limits. Do not skate on private property unless you have the owner's permission. Never wear your skates inside a business or someone else's home.

When you skate in groups:

- Do not give in to peer pressure to skate beyond your level of expertise.
- Look out for one another.
- Give each other plenty of room to maneuver.
- Let an experienced skater bring up the rear.

Smart in-line skaters take safety seriously and always wear protective gear.

Protective Gear

In-line skating requires a lot of protective gear. Properly equip yourself for safe in-line skating—wear a helmet, wrist guards, elbow guards, and knee pads.

Always wear a helmet. Not only is a helmet required by law in many cities and states, it will protect your head and make you more noticeable to motorists.

Wrist guards are important, too. The most common skating injury involves injuries to the wrist, followed by injuries to the lower arm. The natural reaction when you are about to fall is to put your hands out to break the fall. Wrist guards can help reduce the risk of injury.

Elbow guards and knee pads are critical, especially when you want to try a new turn. You will be more willing to try new things if you know you are protected.

Selection and Care of In-Line Skates

When you buy in-line skates, choose the best skates you can afford. Cheaper skates can break while you are skating.

Ask the salesperson if the heel brake is replaceable. Your brake will wear down and you will need to replace it. It is certainly more practical to be able to replace a brake rather than the whole skate.

What type of bearings does the skate have? The higher the bearing number, the smoother your ride will be. While an *ABEC*-1 bearing may be fine for you in your first months of skating, you may want a smoother ride when you get your speed and skills up. On the other hand, there is no need to buy the most expensive skates with the highest grade if you expect to do only occasional skating.

Caring for Your In-Line Skates

Here is how you can keep your skates in great condition:

- When you finish skating, pull the boot liner tongue back to its original position. Remove the liner from the plastic boot if it is wet. If you do not, the liner will wear out before its time and the boot liner tongue may wear unevenly and sag.
- Replace the heel brake when it wears to one-half inch or less. Pay special attention to this if you perform downhill slaloms because brakes can burn up in an afternoon of downhill skating.
- *Rotate* and replace wheels regularly. This will keep you much safer on skates. Dirt and grit may get into your wheel bearings so these must be cleaned regularly, too.
- Read the booklet that comes with your skates. The manufacturer will give you specific instructions about maintaining your skates. You also can take your skates to a shop for maintenance.

In-Line Skating Skills

Whenever you learn a new skill, it is important to review what you have already learned before heading out.

Beginning Stride

Choose a flat, traffic-free paved surface—preferably with grass alongside it and a bench nearby. Here are some ideas:

- A park with an isolated play area, where no one is playing
- A playground at a school when no one is there
- The parking lot at your place of worship, when it is empty (ask for permission beforehand)
- The patio in your backyard

Do not use a path through a park. Wait until you know how to skate well before venturing onto the paths.

The beginning stride builds on the V-walk or duck walk. The duck walk helps you learn to transfer your weight from foot to foot. Concentrate on feeling your weight shift from side to side. This rhythmic motion is essential to skating. This is identical to the duck walk you did in your first session.

Step 1—Waddle in tiny steps from right to left.

Step 2—Move each skate forward a few inches each time.

Step 3—Keep your toes pointed out and your heels as close together as possible, shifting your weight from side to side.

Step 4—Remember to keep your ready position while skating; your balance will be much better.

Step 5—If you start to roll, just coast into a relaxed ready position and resume duck walking.

To do a **beginner's stride,** start from the duck walk and push off against the inside edge of your back skate. Again, shift your weight as you do this. Keep your strides short, shifting from side to side. Going too fast at first can make you lose your balance.

Remember: Think about keeping your knees bent and your posture upright. Do not let your upper body lean forward; this is the wrong position and will make your back ache.

STOP!

Before you go any farther, you need to learn how to stop.

Emergency Stop. Learn to use your heel brake as soon as you can. Here are some other ways to stop right away.

- Step onto grass or dirt, or whatever nonrolling surface is handy.
- Grab something if you are going slowly. (Do not grab another person.)
- If you are going slowly enough, steer your toes together.

In a true emergency, when you are in danger, pitch forward and slide on your wrist and knee guards.

Heel Brake. The normal way of stopping on in-line skates is with the heel brake on your skate. One requirement for this badge is to stop on command on flat pavement, using the heel brake.

To use your heel brake, first learn the **scissors stance.** This is a position you will use again and again in other skills. Practice this skill on grass or carpet. First, get a good ready stance—except with your feet parallel and no more than a few inches apart. Keeping the braking foot in place, shift your weight to the other foot. Bending your leg from the knee, slide your braking foot forward, with all four wheels still on the ground.

Scissors stance

Braking Drill. Stopping is made up of the following three parts:

1. The approach
2. The scissors position
3. The stop

To practice stopping, you need a bit of room to coast, or approach. In this drill, you practice engaging the brake by dragging it. This helps you learn to feel and control your brake.

- Practice approaching by skating forward enough to get a good steady momentum going, then coast for at least 10 feet with your feet parallel and as close together as possible.
- Practice the scissors motion during the coast by shifting your weight to the nonbraking foot while you extend your braking foot forward. Make sure to keep the feet flat, with all four wheels of both skates on the ground. Keep a good ready form with your hands waist-high.

Braking, front view

Braking, side view

- If you have a standard heel brake, engage the brake by lifting the toe of your braking foot until you feel the brake touch the pavement. Let the brake drag lightly.
- If your brake is cuff-activated, engage the brake by pointing the toe of your braking foot forward. This presses the back of your calf into the boot. If you find this difficult, you may need to adjust the position of your brake.

Repeat this braking drill until you feel comfortable with the feel of the brake. You should be able to drag the brake for several feet.

Stopping. Brake lightly, then push the brake pad ahead of you. At the same time that you push the brake forward, drop your hips as if you are sitting down, then *quickly* straighten back up to keep from losing your balance. It may sound as if there are three separate actions here but that is not the case. This should all be done in one smooth motion to keep you balanced.

Practice Stopping. Draw a line with a stick of chalk on the pavement. Skate toward the line and get to a good coasting speed. When you are a couple feet away from the chalk line, begin your stop. It will probably take some practice before you get the hang of it without going over the line. Try stopping from a closer distance, or when skating faster, until you know what it takes to stop at different speeds.

A-Frame Turn

In this turn, you will turn to the left. As always, practice on grass or carpet first. Get into the A-frame position—a ready position, with feet slightly more than shoulder-width apart. The ready position always means your hands are waist-high.

Rotate your head, shoulders, hands, and hips toward the left. Always lead with your head, looking in the direction where you are going. Push against the inside edge of the right skate. Let the lower body follow the upper by pushing the right skate a foot or more forward and steering toward the left.

Repeat the A-frame turn in both directions until you are comfortable with it. Now, do the same drill on the pavement. Again, repeat the turns in both directions until you feel comfortable.

The A-frame position prepares you for the A-frame turn.

The Basic Stride

The basic stride builds on the beginning stride you learned. The difference is that you bend your knees more deeply. This lengthens your stroke and your glide, which makes you roll faster. It also helps strengthen your one-footed glide, which is one of the in-line skating requirements.

Begin this session by practicing the beginning stride. For this stroke, bend your knees to take yourself closer to the pavement. Lengthen the duration of the glide by counting to four between strokes. This makes the stroke more efficient and strengthens your one-footed skating ability.

When you push off, do not push to the back—push directly to the side, keeping your body centered. Recover the stroking leg fully during the glide.

Practicing the basic stride helps a good skater get even better.

The swizzle helps skaters get out of tight spots.

The Swizzle

You can use the swizzle to get around in small spaces. This skill is also known as **sculling.** For your merit badge in this sport, you are required to perform a series of linked swizzles, both forward and backward. For now, we will learn the **forward swizzle.**

Start by standing with your toes out and heels touching. Push your knees together and forward a couple of inches, letting the skates tilt onto the inside edges. Push outward against both heels. As your legs straighten and heels separate, you go forward. You control how fast and how far you go by the intensity you use to push. Recover quickly into an A-frame ready stance (with your legs slightly wider than shoulder-distance apart).

Linking Swizzles. You can link a series of swizzles by going directly from the A-frame stance (a wide-legged ready position) into an A-stance (with the toes together). From there, move into a new V-stance and do another swizzle. Practice this until you can link several swizzles together easily, managing the changing of foot position comfortably.

Half Swizzles. Here is how to accomplish the half swizzle. Continue practicing until you get short glides from each half swizzle.

Step 1—Skate into a moderate speed and begin making forward swizzles.

Step 2—When your toes are out and your heels are touching, shift your weight to the left skate. Begin a swizzle with the right skate by pushing the back heel wheels to the right.

Step 3—Shift your weight onto the right skate and begin to press the left skate into a swizzle, pushing out to the side from the back two wheels. Keep both skates in contact with the ground.

Spin Stop

Do not try the spin stop until you can easily do the A-frame turn. If you cannot get this on the first try, or even the second or third, just keep practicing.

Step 1—Skate at a moderate speed.

Step 2—Rotate your upper body to the left to begin an A-frame turn. Make sure your A-frame stance is very wide.

Step 3—As you put pressure on your right skate, lift the left heel and rotate the left knee out until your left heel is under your body. Both toes are now pointed outward.

Step 4—Return the left skate to the pavement and balance your weight evenly between your thighs.

Snowplow Stop. Skate at a moderate speed, then begin making forward swizzles. Apply pressure to both inside edges as your toes rotate in. Increase the pressure with your hip muscles and by bending your knees. Practice this technique using a chalk line on the pavement as a stopping place.

Making the Turn

Practice in a place where you have a large amount of room. Place a small obstacle (a rock, for instance) in the area where you plan to do the turn. Practice this until you can get close to your obstacle but clear it with a U-turn. To do the parallel turn:

Step 1—Skate at a moderate speed toward the area around the obstacle.

Step 2—Put the right skate forward and lock your left knee behind the right.

Step 3—Twist your upper body and hips halfway around to the right, and look back in that direction.

Step 4—Let your head and shoulders pass over the right skate's outside edge into the center of the turn.

Step 5—After you turn at least 90 degrees, straighten up.

Mobility Drills

Use mobility drills to strengthen your skating skills—especially one-footed balance. Your ability to balance on one foot should be very strong before you attempt to learn more complex skating skills, such as crossovers.

Pick-Up. Skate forward into a coasting ready position. While coasting, reach down to touch your knees, then your toes, then straighten. Repeat this several times. Practice crouching down to pick up small items from the pavement as you skate. Use either hand so you develop your sense of balance without overexercising the muscles on one side of your body.

Marching. Skate into a moderate pace. While coasting, start making short marching steps. Try to stay on the supporting skate as long as possible while the other skate is off the pavement. Work on both legs.

Single-Foot Glides. Skate into a moderate pace. Lift a skate up and out behind you, leaning forward slightly. Lift your arms out to the side to balance yourself. Try to hold this position as long as possible.

Single-foot glide

Training Wheel. Skate into a moderate pace. Lift your left heel and let the left front wheel bear about a third of your weight while rolling it a few inches behind your right skate. Try to keep the left skate from wobbling, and keep your knees close together.

The Kneel. Skate into a moderate pace, and then do a training wheel with your right foot. Let your hips sink directly over the right heel. Divide your weight equally across the right toe and the left skate. Keep the skates as close as possible.

Crossovers

You will perform crossovers as one requirement for the Skating merit badge. The crossover lets you stroke and maintain momentum as you round corners. It builds on the crab step you did at the beginning. To practice the crossover, find pavement with a slight slope.

Step 1—Assume the ready position, arms waist-high, standing with your left side toward the slope. Rotate your head and arms in that direction.

Step 2—Begin making crab steps to the left, stepping sideways and downward. After making two steps, start turning your toes toward the bottom of the slope as you return each skate to the pavement. You will begin to roll down the slope with each step.

Step 3—Maintain your upper body rotation and your stepping rhythm. Try to crab step your way around a big circle to your left.

Repeat this drill, but begin with your right side facing the slope. To get good practice doing crossover turns, find a large circle on a school or park playground. Skate toward the circle and repeat the moves you did in the session above.

Backward Skating

Be sure to use a clear practice area without any traffic, because you will not be able to see where you are going.

Backward Turns. On a slight incline, face away from the incline and assume a wide A-frame stance. Allow your skates to start rolling backward. Look over your right shoulder and sweep your right hand around behind you at shoulder height until it points down the hill. The pressure of the rotation on your right skate's inside edge results in a turn toward the right. Repeat this two or three times, starting from the top of the slope each time. Practice on both sides.

Backward Swizzle. The backward swizzle is an essential part of skating backward, as well as being a requirement for your merit badge. Here is how to do the backward swizzle.

1. Assume the A-stance on the pavement.

2. Push outward quickly against both skates' toe wheels.

3. Recover into a wide ready position.

To link several swizzles together, pull your heels together and stand tall as you recover. Immediately turn into a new A-stance and repeat the same movements described above.

Backward Strokes. Begin a series of backward swizzles and get into the swizzle rhythm. When you reach the A-stance, shift most of your weight to the left skate. Press the inside edge of the right skate to begin a half swizzle. Immediately shift your weight to the right foot and press the left skate into a half swizzle. You should get a short glide from each backward half swizzle.

Lunge Turns

Your counselor will choose an object around which you will perform a lunge turn. First practice the lunge turn movements. Repeat several times in both directions, making sure to bring your upper body forward over the knee with each lunge.

Step 1—Assume the ready position with your feet in the safe-T and your hands at waist height.

Step 2—Rotate your body so your chest is pointed in the same direction as your left toe.

Step 3—Lunge on the right leg by pushing against the right skate's inner edges.

Lunge Turn From an A-Frame. Repeat this sequence until you are comfortable with these motions.

Step 1—Skate into a moderate speed.

Step 2—Turn your upper body to the left and begin an A-frame turn. Push the left skate ahead and position your chest over the knee.

Step 3—After the turn, return to a normal, shoulder-width stance.

Lunge Turn on the Course. Remember to practice turns in both directions.

Step 1—Mark out a place on the pavement to represent a turn.

Step 2—From 25 feet away, approach the corner aggressively with well-bent knees.

Step 3—About a yard before the mark, push the left skate forward and turn your upper body toward the direction of the turn.

Step 4—Sink into a low lunge, centering your chest over the left knee and transferring your weight to that skate. The other leg has only enough weight to maintain some pressure.

Step 5—Let both skates tip onto their left edges and press into the turn.

Step 6—Close the gap between the skates and straighten to resume forward momentum.

Slalom Turns

Be sure you have mastered parallel turns before you attempt slalom turns. First, practice the motions used in slalom turns.

Step 1—Start from the ready stance. Push the left skate forward until the ankle is even with the toes on the right foot.

Step 2—Sink slightly while tipping both skates onto their left wheel edges.

Step 3—Bring the left foot back under your hips and push the right foot forward.

Step 4—Sink slightly while tipping both skates onto their right wheel edges.

One-footed slalom

Slalom Skating. For in-line skating, this merit badge requires you to perform a series of one-footed slaloms on a gentle slope.

Step 1—Skate into a moderate speed.

Step 2—Push the left skate forward, sink, and bend both knees to the left. This causes you to turn. As the turn progresses, your weight transfers to the right skate.

Step 3—Rise and straighten your bent knees so you can shift your weight to the left skate.

Step 4—As your skates straighten out from the left turn, push the right foot forward to prepare for a right turn.

Step 5—Sink as you roll both skates onto their uphill edges, beginning the next turn.

The Power Stride

Aerodynamics is the way the wind works with (or against) a moving object. You see aerodynamic designs at work on sports cars. Auto manufacturers try to keep their designs for these cars as flat as possible. Tall, boxy cars generally will not move as fast because their design works against the wind—causing what is known as wind resistance.

The power stride takes aerodynamics into consideration, helping you design your body into a sleeker, flatter shape that moves more smoothly and quickly in the wind. This increases your stride—and your speed.

In learning the power stride, you will learn the tuck, the arm swing, the stride angle, and outside edging.

The Aerodynamic Tuck. This stance puts you in a position to skate fast and smooth. Practice the stance until you are completely at ease with it. If you have a rough time balancing with both hands behind your back, try it first with just one hand.

Step 1—Stand with feet shoulder width apart. Fold your hands and place them under your chin, then bend until your elbows touch your knees.

Step 2—Relax your ankles, knees, and hips just enough to rise to a comfortable position. Your upper body should flex forward at the hips with your weight over your arches.

Step 3—Clasp your hands in the small of your back.

The Arm Swing. Get into the power stride tuck. With both hands at your thighs and palms in, swing one hand forward and the other back.

The Angle.

Step 1—From the ready position, bend your knees to get your hips closer to your heels, as in the basic stride position.

Step 2—Shift your weight to one foot and extend the other leg to the side. Look out toward your action skate and notice its position on the pavement.

Step 3—Now assume the tuck. Again, shift your weight to one skate and extend the other out to the side. Notice how much farther out the skate is. The lower position of your body allows you to add length to your stride through the length of your leg.

Imagine a line crossing under your skates, left to right, and do your best to stride as if the line is always there, with strides going to the side.

The Edge. Now, picture a line running between your skates, front to back. The first two strides you learned kept each skate on its own side of this center line. With the power stride, you are crouched into a lower position, swinging your arms front to back, and striding straight out to the side.

You also are making this stride even more aggressive by recovering on the opposite side of the center line. This puts your skate on its outside edge, and you have to let the edge roll back onto the inside edge to push out of the stroke. This squeezes even more length out of the stride.

Outside Edge Swizzle. Here is how to perform the outside edge swizzle:

Step 1—Begin by performing several swizzles.

Step 2—As your feet close into the A-stance with your toes in and heels out, let your ankles relax so your skates tip onto their outside edges.

Step 3—After several swizzles from your normal position, do the same from the tuck.

Step 4—Begin doing swizzles with the right foot. Ride on the center edge of the left skate while pushing the right skate out and back to the middle.

Step 5—Roll the right skate from the outside edge onto the inside edge as you push to the side.

Going Over the Line. Standing still, practice crab-stepping just as you did when you first learned to skate. Now practice the same steps first from a slow coast, then at a slightly faster speed. Try it in the tuck position, since this is essential to the power stride.

Practicing the Stride

Mastering the power stride requires putting four elements together:

1. The tuck
2. The arm swing
3. The stride angle
4. Outside edging

Then follow these steps:

Step 1—Begin by practicing the power stride on one skate at a time, using the basic stride for the other leg.

Step 2—In the tuck position, skate into a good rhythm, swinging your arms front to back and pushing your strides straight out to the side.

Step 3—On one skate, begin recovering on the opposite side of the center line. With the other skate, continue using the basic stride.

Practice this again and again with one skate until you are comfortable with the feeling—then go on to the other skate.

Transitions

A transition is changing directions while you are rolling. It is like a car shifting from forward to reverse.

Mohawk. For in-line skating, you are required to perform a mohawk. Follow these steps to learn how to perform this transition:

Step 1—Skate into a good speed.

Step 2—Begin a spin stop to the left. As soon as your left heel wheel touches the pavement, shift onto the left skate.

Step 3—*Pivot* on the right toe wheel to make the skates parallel as your hips rotate backward—and begin skating backward.

Backward-to-Forward Transition. To learn this transition, you need to find a slight downward slope.

Step 1—Face uphill and allow yourself to start rolling backward.

Step 2—Look over your right shoulder to begin a backward turn.

Step 3—Rotate a quarter turn and shift your weight to the left leg.

Step 4—Finish rotating, push off, and begin skating forward.

Backward crossover

Backward Crossovers

First warm up with a series of crab steps to the left.

Step 1—Begin this drill by making backward swizzles clockwise in a circle, looking over your left shoulder.

Step 2—Transfer your weight over your left knee and continue around the circle by making the swizzling motion with just your right skate. Stretch out both arms as you bend your knees and rotate your upper body left, toward the center of the circle.

Step 3—Push the right skate ahead of the support skate and inside the circle with each stroke. Keep your balance steady over the supporting leg.

Step 4—Allow the left ankle to relax and tip onto the outside edge. Let your left skate go underneath your body and away from the center of the circle, passing under your hips.

Step 5—Swizzle the right skate forward inside the circle to take your weight.

Step 6—Push the right skate back out. Recover the left skate and return it to the pavement under your left hip.

Remember to keep your knees well-bent and your upper body rotated.

Hopping Over Obstacles

Practice this stationary exercise while standing on the grass or carpet. Then practice while standing on the pavement. Make sure you are comfortable with the stationary jump before you progress to the rolling jump. Work on lifting your heels closer to your hips when you jump, so you can clear taller obstacles.

Step 1—Assume a ready position, hands waist-high. Jump an inch or two off the ground. Remember to keep the ready position as your legs absorb the impact when you land.

Step 2—When you are ready to try your jump while rolling, pick some line or mark on the pavement to represent an obstacle. Stroke toward it, then coast into a ready position as you approach it. Jump an inch or two off the ground, letting your legs absorb the impact when you land. Keep your knees bent and your arms at waist height as you land.

Curbs

Until you learn to hop while rolling, you will need to approach curbs more slowly. Reach the curb at a slow speed.

Step 1—Lean over and reach forward with both arms as you lift the action leg and clear the curb. Step onto the curb and push off against the inside wheel edges of the support leg to continue on your way.

Step 2—Approach stepping off a curb the same way. Lean over the curb and reach forward with your arms while lifting and extending the outside skate ahead enough to clear the edge. Remember to allow extra clearance for the heel brake.

Step 3—Land on the outside edge and push off into a glide as soon as you recover the other skate.

When you have learned to hop over obstacles, approaching curbs becomes easier. Just hop up, remembering to lift your heels closer to your hips.

First Aid for Skating Injuries

Like most sports, skating—whether on wheels or blades—has a unique set of risks and precautions. Safety-conscious skaters should be prepared to give first aid for the following conditions:

Hypothermia and Frostbite

Hypothermia occurs when the body's core temperature falls below the normal range. Any combination of cool weather, wet skin or clothes, wind, exhaustion, or hunger can lead to hypothermia. Skating may present hypothermia risks. As the body cools, the victim will shiver in an attempt to create heat.

Be aware of hypothermia's danger signs:

- Loss of muscle strength and coordination
- Disorientation or incoherence
- Pale or bluish skin tone

In severe stages, shivering stops, unconsciousness follows, and death may occur unless immediate treatment is received.

Anyone who starts to shiver or who shows discoloration around the lips or cheeks should be immediately moved to a warm place. Wet clothing should be removed and the victim thoroughly dried off. If no warm shelter or other heat source is available, the victim should be pressed closely with one or more persons so that heat can be transferred through direct skin contact.

Frostbite may occur whenever flesh is exposed to low temperatures. Toes, fingers, nose, cheeks, and ears are especially susceptible. Skating in cold, windy weather risks frostbite if feet, hands, and face are not well-protected.

Also the body must be warm enough to supply warm blood to those areas susceptible to frostbite, so it is important to have warm clothing and cover the head, torso, and extremities. As the flesh begins to freeze, it reddens and is painful. In severe frostbite cases, the skin stiffens and is grayish or whitish. Blisters may appear.

When frostbite occurs, immediately warm the affected area. Breathing on fingertips or placing chilled fingers beneath clothing and against warm skin, such as under the arms, is usually sufficient in mild cases.

For more severe freezing, immerse the cold area in tepid or lukewarm (104 to 108 degrees Fahrenheit) water. Avoid heat or abrasion, which can injure or seriously damage tissue made sensitive by the cold. Blistering in severe cases requires sterile dressing, treatment for shock, and immediate medical attention.

Heat Reactions

Heat reactions result from overheating when the body cannot keep itself cool enough. If a skater feels dizzy or faint, nauseous, or weak; develops a headache or muscle cramps; or looks pale and is sweating heavily, treat for heat exhaustion.

- Have the person lie down in a cool, shady spot with the feet raised.
- Loosen clothing and cool the person with a damp cloth or a fan.
- Have the victim sip water.

Recovery should be rapid. If the condition worsens, get medical help. **Heatstroke** is the extreme stage where **dehydration** (body water loss) has caused a very high body temperature and a cessation of sweating. The pulse is extremely rapid and the person will be disoriented or unconscious. The victim must be cooled immediately through immersion in cool water or with cold packs, and the body's fluid must be increased. Treat for shock and seek emergency medical help.

Fractures

Fractures are broken bones, injuries all too frequently associated with skating. There are two kinds: closed (simple) and open (compound). A closed fracture is a broken bone where the skin is not torn or punctured. If there is a wound through the skin at the break, it is called an open fracture. Signs of a fracture may include the following:

- Tenderness to the touch
- Swelling and discoloration
- Unusual or abnormal position or movement
- Grating sound or feeling
- Immobility
- Sharp snapping sound or feeling at the time of the injury

Keep the victim still and quiet with no movement of the injured area. Treat for shock, if indicated. Apply cold packs to reduce pain and swelling. For open fractures, use direct pressure to control bleeding. In all cases, get medical help to the victim. If the victim must be moved, splint the fracture prior to transport. Techniques for improvising a splint are discussed in the *First Aid* merit badge pamphlet.

Sprains and Strains

Sprains are caused by twisting, wrenching, or lifting movements that tear or stretch tissues around a joint. This type of injury causes sudden pain and swelling at the joint. There may be some discoloration, and the joint likely will be tender to the touch and very painful when moved. Sprains are relatively common injuries in skating due to falls. Elevate the injured joint, apply cold compresses, and treat as a fracture or broken bone.

The term **strain** usually refers to a less severe joint or muscle injury where tissues are not torn but may have been overextended or overstressed. Depending on the severity, treat the same as a sprain.

Shock

When a person is injured or under great stress, the circulatory system may fail to provide enough blood to all parts of the body. This condition is known as **shock.** It can accompany any serious skating injury. In severe cases, it can be fatal.

Indications include pale, moist, clammy or cool skin; weak and rapid pulse; weakness; shivering; thirst or nausea; or shallow, rapid breathing. Because of the risks and uncertainties that may accompany a serious injury, every victim should be treated for shock.

- Keep the victim lying down with the feet slightly elevated.
- Prevent loss of body heat.
- Keep the airway open and give rescue breathing if necessary.
- If the victim is conscious, give water.
- Treat the underlying injury and get medical help.

Bumps, Bruises, and Scratches

Contusion is the medical term for bruises—those black-and-blue marks that appear on the arms and legs when you bump into things or fall when skating. Most bruises are not serious and are easy to recognize and treat.

Covering the site of a new bruise with a cold compress or towel for 30 minutes will help reduce discoloration, pain, and swelling. Also, slow the flow of blood into the damaged tissues by resting the injured area.

Bruises that include possible bone injury, or any contusions on the head or abdomen coupled with sharp or persistent pain, should be seen by a medical professional.

Lacerations, incisions, and **abrasions** (cuts and scrapes) may occur while skating, or more likely when falls occur on rough surfaces. As in other situations, the wound should be cleaned, disinfected, and covered. The unit or patrol first-aid kit should provide for minor wound treatment. For severe bleeding injuries, control bleeding with direct pressure or at pressure points until emergency medical help is available.

In skating, **blisters** are most likely to occur on the feet. Skaters should be attentive to any tenderness or sensitive areas ("hot spots") that indicate the start of a blister. You may be able to adjust lacing or socks to avoid friction on the sensitive area. If not, be smart: Listen to your body and quit for the day. If you have no choice but to continue the activity, follow preventive steps such as taping and the use of commercial skin toughener.

Prevention goes hand in hand with mitigation, which means "to lessen in force or intensity" and "to make less severe." By taking precautions to manage risk and first aid, you can be prepared to anticipate, help prevent, mitigate, and respond to just about any skating hazard.

Skating Terminology

aggressive. This style of skating emphasizes stunts, either on street courses or special ramps and pipes built for this purpose.

aim. The starting direction of an edge or sequence of steps.

American National Standards Institute (ANSI). This entity establishes standards for protective gear such as knee pads and helmets. Your equipment should be certified by ANSI or Snell, a similar body.

Annular Bearing Engineering Council (ABEC). Organization that has developed a scale to measure and rate the precision of ball bearings. The scale includes ABEC-1 (the least precise), ABEC-3, ABEC-5, and ABEC-7 (the most precise).

axel. Short for Axel Paulsen jump, a popular advanced jump with 1½ forward rotations in the air.

axis. Imaginary line bisecting the circles of figure eights either longitudinally (long axis) or transversely (short axis)

bearings. These metal encasements house the ball bearings that help give you a smoother ride on your skates.

bunny hop. A forward-moving jump in which the skater jumps upward while gliding on one foot to land on the toe of the other foot.

change of edge. A change of curve from outside to inside or vice versa on one skate without a change of skate direction.

counters. The names of certain figure-skating turns performed on one foot.

edge. In ice skating, the long side of a skating blade that makes contact with the ice. The word is also used in figure skating to describe the mark made on the ice by the blade edge. In roller skating, a curve traced by the employed skate.

flat. In ice skating, the mark left on the ice when both the edges of a blade make contact with the ice, causing the skater to progress without curve. In roller skating, a straight line direction that is without curve.

free. Not in use. Not in contact with the skating surface. Unemployed.

glide. The forward or backward movement of the blade over the ice.

hockey glide. A two-footed glide with one foot following the other in a curving arc.

inside edge. A curve wherein the inside of the foot is toward the center of the curve being traced.

leading. (1) In the direction to be traced. (2) In position to control or having control of the team movement.

loops. The names of certain compulsory figures in figure skating.

lunge. A body position with the skating knee fully flexed, hips and shoulders held vertically above the skating foot, while the free leg is fully extended backward.

mohawk. A turn from forward to backward or backward to forward during which the skater changes feet, skating from one edge on the first foot to an edge of similar character on the second foot. Probably the most popular move for changing direction.

opening steps. Preliminary edges to gain momentum for execution of a dance or other skating movements.

outside edge. Curve with the little-toe side of the foot toward the inside of the curve.

pivot. In ice skating, a circular skating movement in which the toe picks of one skate are used as the center while the other skate revolves around the center either forward or backward, on either inside or outside edge. In roller skating, a movement where one set of the skate's wheels is used as a center while the other slides around that point.

rocker. Name given to certain figure skating turns performed either forward to backward or backward to forward on one foot, from one edge to an edge of a similar character.

Snell. Your protective equipment should be certified by this foundation or by ANSI (see entry for ANSI).

spin. A rotating action performed on one or both feet around a spot on the skating surface. There are many spins in figure skating, some taking their names from a description of their appearance (for example, corkscrew, headless, crossfoot), others from a description of the edges and/or direction used, and others from their originator's names. Some are performed on edges; some are performed on the toe.

stop. Maneuver that causes either one or both skates to discontinue motion. In ice skating, some stops are performed on two feet and some on one foot. Most stops involve a skidding action with one or both blades, but in figure skating some stops are made by use of the toe picks. In roller skating, the skates are placed in the T position to stop.

street. Refers to freestyle skating along public streets, parking lots, sidewalks, university campuses, government buildings, and other public places. Street could also refer to a type of competitive course.

tracing. The mark left on the ice after a skate has glided over the surface. It is critically important in the judging of compulsory figures.

vert. Short for vertical. Describes trick skating that involves combinations of aerial jumps, flips, spins, stalls, foot grabs, and other moves using specially made ramps and pipes.

waltz jump. A moving jump from the forward outside edge of the takeoff blade followed by a half-rotation in the air and the landing on the backward outside edge of the other foot.

wheel rotation. Flipping and/or switching the positions of skate wheels to help prevent uneven wear.

Skating Resources

Scouting Literature

Deck of First Aid; Emergency First Aid pocket guide; *Be Prepared First Aid Book*

With your parent's permission, visit the Boy Scouts of America's official retail website, www.scoutshop.org, for a complete listing of all merit badge pamphlets and other helpful Scouting materials and supplies.

Books

Ice Skating

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Miller, Liz. *Get Rolling.* Get Rolling Books, 2003.

Publow, Barry. *Speed on Skates: A Complete Technique, Training and Racing Guide for In-Line and Ice Skaters*. Human Kinetics, 1998.

Skating Organizations

Inline Skating Resource Center
Website: www.iisa.org

Roller Skating Association International
Telephone: 317-347-2626
Website: www.rollerskating.com

USA Roller Sports
Telephone: 402-483-7551
Website: www.teamusa.org/USA-Roller-Sports

U.S. Figure Skating Association
20 First St.
Colorado Springs, CO 80906
Telephone: 719-635-5200
Website: www.usfigureskating.org

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