



Pointe Claire Curling Club

Curling Instructional Program

4th Edition (2012)

Weekly Sessions Manual

**THIS MANUAL IS NOT TO BE
REMOVED FROM THE POINTE
CLAIRE CURLING CLUB**

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**Pointe Claire Curling Club
Instructional Program Manual
(Fourth Edition – September 2012)**

This fourth edition of the manual is an update to the Third edition prepared by Keith Mallette. It is designed to be used by both new and experienced curlers, retaining the third edition's question and answer format to deal with individual and specific skills or information related to the Sport of Curling. Weekly sessions have been prepared in order to introduce a specific topic in a brief 5 to 10 minute presentation which can be practiced in the subsequent curling sessions.

I encourage your feedback – Jerome Gazdewich.

Table of Contents

Ethics and Fair Play

Week 1	Curlers Code of Ethics	page 4
	Declaration of Fair Play	page 4

Pre Game Preparation

Week 1	Warm-up	page 5
--------	---------------	--------

Etiquette

Week 2	A Review of the Common Rules of Etiquette	page 6
--------	---	--------

Rules

Week 3	A Few Rules to Remember	page 7 - 8
--------	-------------------------------	------------

Free Guard Zone

Week 4	Understanding the Free Guard Zone Rules.....	pages 9 -10
--------	--	-------------

The Delivery

Week 5	Element 1 – The Grip.....	page 11
Week 6	Element 2 – The Stance Position.....	page 12
Week 7	Element 3 – The Backward Motion.....	page 13
Week 8	Element 4 – The Forward Motion	page 14
Week 9	Element 5A – The Slide	page 15
Week 10	Element 5B – Body Height During the Slide and Release	page 16
Week 11	Element 6A – The Release.....	page 17
Week 12	Element 6B – Stone Rotation	page 18
Week 13	Element 7 – The Follow Through.....	page 19

Week 14 The Two-Step vs Three-Step Deliveries page 20

Brushing (Sweeping)

Week 15 Part 1 – Stance and Direction of Motionpage 21

Week 16 Part 2 – Sweeping for Maximum Effect page 22

Week 17 Part 3 – Legal vs Illegal Sweeping page 23

Week 18 Part 4 – Past the Far Hog Line page 24

Types of Shots

Week 19 Part 1 – Draw Shots page 25

Week 20 Part 2 – Takeout Shots page 26

Timing of Stones

Week 21 Part 1 – Fast Ice vs Slow Ice..... page 27

Week 22 Part 2 – Judging How Far the Stone Will Travel page 28

Communication

Week 23 Basic Signaling of Shots..... page 29

Strategy

Week 24 Strategy – An Introduction..... page 30 -31

Week 25 Basic Strategy page 32 - 33

Week 26 Four Rock Rule Opening Strategies page 34 - 35

Fault Correction

Annex A Common Curling Delivery Faults pages 36-37

Annex B CCA Delivery Fault Correction Guide..... pages 38-39

References

..... page 40

Note. The terms rock and stone are both used in this manual and are interchangeable.

Week 1 – Curlers' Code of Ethics and Declaration of Fair Play

As Curling for General Play relies on the players to police themselves, the Canadian Curling Association has adopted the following Code of Ethics and Declaration of Fair Play as an official supplement to the Rules of Curling. All players should read and agree to abide by these regulations.

Curlers' Code of Ethics

I will play the game with a spirit of good sportsmanship.

I will conduct myself in an honourable manner both on and off the ice.

I will never knowingly break a rule, but if I do, I will divulge the breach.

I will take no action that could be interpreted as an attempt to intimidate or demean my opponents, team-mates or officials.

I will interpret the rules in an impartial manner, always keeping in mind that the purpose of the rules is to ensure that the game is played in an orderly and fair manner.

I will humbly accept any penalty that the governing body at any level of curling deems appropriate, if I am found in violation of the Code of Ethics or rules of the game.

Declaration of Fair Play

Fair Play begins with the strict observance of the written rule; however, in most cases,

Fair Play involves something more than even unfailing observance of the written rule.

The observance of the spirit of the rules, whether written or unwritten, is important.

Fair Play results from measuring up to one's own moral standards while engaged in competition.

Fair Play is consistent demonstration of respect for team-mates and opponents, whether they are winning or losing.

Fair Play is consistent demonstration of respect for officials, an acceptance of their decisions and a steadfast spirit of collaboration with them.

Sportsmanlike behaviour should be demonstrated both on and off the ice. This includes modesty in victory and composure in defeat.

Week 1 (continued) - Pre-Game Preparation

Warm-up

Before any practice or game, time should be made to Warm-up and stretch the muscles that come into play.

A proper warm-up has three components:

1. Aerobic exercise
2. Dynamic stretching exercises
3. Simulation exercise

These are summarized as

“step-stretch-slide”.

1. Aerobic exercise serves the purpose of generating body heat and raising the level of function of the cardio-vascular system. It should be done for approximately 5 minutes just prior to 10 minutes of stretching before going on the ice. It should be done in full curling uniform to increase body warming but not to the point of breaking a sweat.

Examples of this type of exercise are “high-stepping” and “jogging-on-the-spot”.

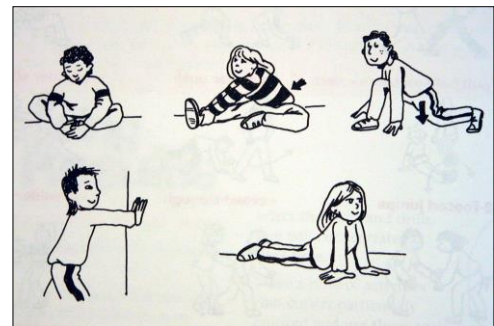
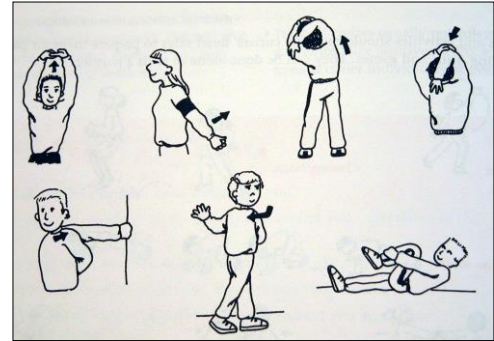
2. The purpose of dynamic stretching is to overcome stretch reflexes which would normally prevent us from moving comfortably through the range of motion required for delivering stones and sweeping and they should be done for 5 to 10 minutes shortly before going onto the ice.

This type of stretching could include: arm circles/swings, lunges, high knee steps, leg swings, hip rotations, neck rotations, ankle hoppers, jumping jacks, squats, etc. Work out the major muscle groups and joints progressing from one end of the body to the other.

3. The final phase of the curling warm-up is done on the ice using the sliding movements associated with the delivery skills. Before taking their first slides from the hack, players should first cool down their sliders by moving it around directly on the ice, preferably behind the back line or by moving up and down the ice, along the side of the sheet.

Players can also simulate the sliding motion by getting down on the ice facing and holding onto the backboard or side boards and simply stretching out and/or slightly pushing and pulling themselves backward and forward.

Slides from the hack can progress from an initial easy leg drive and upper body position to a full take-out drive, stretching out the back through its full range of motion.



Week 2 - Etiquette

While there are numerous rules of the game of curling, much of how the game is played is controlled by an understanding of the etiquette of the game. Know the rules – a copy of the rule book can be found on the Canadian Curling Association website.

What should your team be doing when the opposition is delivering?

1. Only the skip and vice-skip may be positioned inside the hog line at the playing end. They shall position themselves behind the back line when the delivering team is in the process of delivery. Both players shall be motionless with their brooms positioned in a manner not to interfere with or distract the attention of the player who is in the process of delivery.
2. The player who is next to deliver may take a stationary position to the side of the sheet behind the hacks at the delivery end. The player shall remain silent and motionless when the delivering team player is in the process of delivery.
3. The players not taking the positions in (1) or (2) shall position themselves **between the hog lines** and to the **extreme sides of the sheet** when the opposing team is delivering a stone. The players positioned in this area **shall remain in single file** when the delivering team player is in the process of delivery.
4. The non-delivering team members shall not take any position or cause such motion that would obstruct, interfere with or distract any member of the delivering team.

What should you be doing after the last rock has been delivered?

1. At the conclusion of an end, all players should remain outside of the rings until the thirds have agreed upon the score.
2. Players should be careful when pushing stones into the corners in preparation for the next end, making other players aware of any stone being pushed in their direction.

What can be done to speed up the game?

1. Always be prepared to deliver when it is your turn to throw – clean your stone before receiving the shot call from the skip.
2. Once the thirds have determined the outcome of the end, help to carefully push the stones into the corner.
3. If you use your own stabilizer, be sure that it is at the correct end of the ice.
4. Time allocated for non-officiated play is **15 min per end** (or two hours for an eight end game). It is considered a violation of the fair play rule to purposely slow a game down so that the full eight ends cannot be played in the allocated two hours.

Week 3 – A Few Rules to Remember

When is a delivered stone not in play?

A stone must be **fully** over the hog line at the playing end to be considered in play. A stone staying outside of play after striking a stone in play shall remain where it stopped including any subsequent stones striking that particular stone. A stone which crosses the hog line but spins such that it comes to rest biting the hog line is considered out of play.

A stone which clearly crosses the back line is removed from play immediately.

A stone that touches a sideline, hits a divider or comes to rest biting a sideline shall be immediately removed from play. If a stone in motion hits a stationary stone and a sideline or divider at the same time, the stationary stone shall be allowed to take its course as if it had been hit first.

What options do you have after winning the coin toss?

The winner of the coin toss has the option of playing the first or second stone of the first end. The team that plays the first stone of the end has choice of handle colour.

Are you allowed to deliver from either hack?

Right hand players shall deliver from the left hack and vice-versa.

When do you have to release the stone?

The stone shall be released **before it reaches the hog line at the delivering end.**

When can you safely abort your delivery?

A stone can be replayed if it has **not** reached the nearer tee line.

What happens if a player misses a turn?

If an error in a team's delivery rotation causes a player to miss a turn, the player who missed a turn will then deliver the last stone for their team in the end. If it cannot be determined who had missed a turn, the lead will deliver the last stone.

What must you do if you or your equipment touched a stone in motion?

A stone in motion must not be touched by any player, their equipment or personal belongings.

If a stone is touched between the hog lines:

- By the team to which it belongs, it is removed from play immediately by that team.
- By the opposition or an external force, it is re-delivered.

If a stone is touched inside the hog line at the playing end:

- By the team to which it belongs, **all stones are allowed to come to rest**, after which the non-offending team has the option to remove the touched stone and replace all stones that were displaced after the infraction to their original positions; or leave all stones where they came to rest; or place all stones where it reasonably considers the stones would have come to rest had the moving stone not been touched.
- By the opposition, **all stones are allowed to come to rest**, after which the non-offending team places the stones where it reasonably considers the stones would have come to rest had the moving stone not been touched.

What happens if you displace a stationary stone?

Displaced stationary stones shall be replaced as close as possible to where the opposing skip considers they originally lay.

Who decides the score of an end?

A team scores one point for each eligible stone that is nearer to the pin (or tee) than is any stone of the opposing team. An end is decided when the skips or vice-skips in charge of the house at the time agree upon the score for that end.

If a stone which may have affected the points scored in an end, is displaced prior to the final determination of the score, the team displacing the stone shall forfeit the point(s) involved.

When is the measuring device used?

No physical device to aid visual observation shall be used in measuring **prior to the last stone delivered in the end coming to rest** (except as noted below).

Measurements shall be taken from the tee to the **nearest** part of the stone. A measure that results in stones being an identical distance from the tee shall be declared tied.

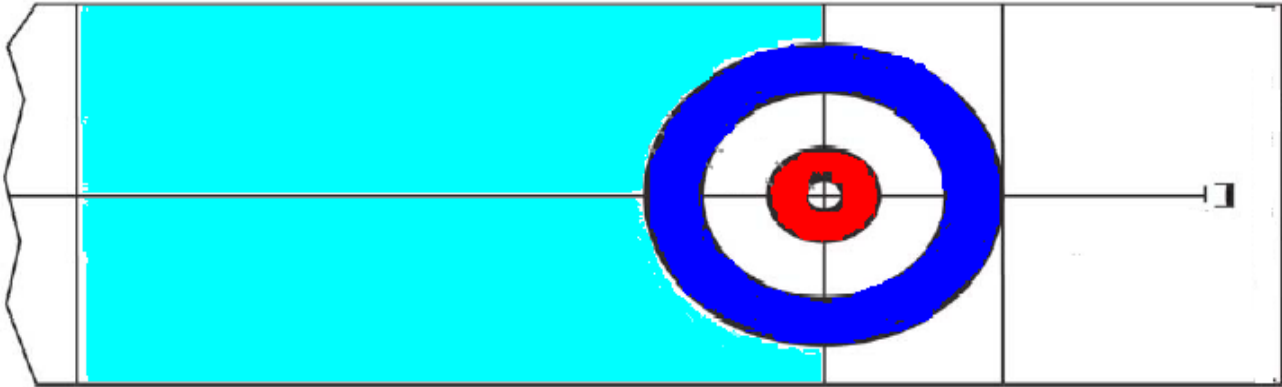
If two or more stones are so close to the tee that a measuring device cannot be used, and if a visual comparison cannot determine which stone is closest to the tee, the stones shall be considered tied.

Decisions on whether a stone is in or out of play at the hog line, sidelines and back line shall be visual (except as noted below).

What is the exception to the rules?

The only exceptions are that the 6 foot stick may be used to determine whether a stone is in the free guard zone (for the first three stones) or whether a stone is on the back line in proximity to the centre line to determine whether or not it is in play.

Week 4 - Free Guard Zone



What is the Free Guard Zone?

The area from **between** the far hog line and the far tee line, **excluding** the house, makes up the Free Guard Zone.

What is the Four Rock Free Guard Zone Rule?

Any stationary stone[s] belonging to the opposition that is/are located within the free guard zone shall not be removed from play by the delivering team prior to the delivery of the 5th stone of the end.

What is the advantage of the four rock free guard zone rule?

The four rock FGZ rule enables the team without last rock to establish 2 guards with its lead stones and the team with last rock to establish 1 guard with its first lead stone.

Can a team remove its own stone from the free guard zone?

The FGZ rule does allow a team to remove their own stone located in the FGZ from play prior to the delivery of the 5th stone of the end (provided that it does not cause an opposition stone in the FGZ to be removed from play).

What if a stone makes contact with a stone just over the hog line and remains on or in front of the hog line?

A stone which comes to rest biting or in front of the hog line after making contact with a stone in the free guard zone is considered to be in the free guard zone. A stone which comes to rest outside the house but biting the tee line is not in the free guard zone.

What happens if an opponent's stone is removed from play prior to the delivery of the fifth stone of the end?

If an opposition's stone(s) located in the FGZ is removed from play prior to the delivery of the 5th stone of the end, **directly or** indirectly, the delivered stone **must**

be removed from play and any other displaced stationary stone(s) replaced as close as possible to its original position(s).

Note: A delivered third or fourth stone of an end may hit an opposition stone(s) in the free guard zone onto a stone(s) not in the free guard zone. The play stands if the opposition's original free guard zone stone(s) remains in play. If the opposition's original free guard zone stone(s) is removed from play, then the delivered stone is removed and the stones place in their original positions.

What happens if a delivered third or fourth stone of an end hits a stone not in the FGZ and as a result an opponent's stone in the FGZ is removed from play?

If the delivered third or fourth stone of an end initially hits a stone(s) not in the free guard zone and as a result an opposition's stone in the free guard zone is removed from play, the delivered stone must be removed from play and the displaced stone(s) returned to their original positions.

What happens if the delivered third or fourth stone of an end simultaneously hits a stone(s) eligible to be removed from play and an opposition's stone(s) in the free guard zone and as a result the opposition's stone(s) in the free guard zone is removed from play?

See answer above.

How is it determined whether a stone is in the free guard zone?

After the delivery of each of the first three stones of an end it is the responsibility of the skip of the team who is about to deliver to ensure agreement with the opposing skip as to whether or not any of the stones in play have come to rest in the free guard zone. If they cannot agree, they may make the determination by using the six foot measuring stick. If the position of another stone(s) hinders the use of the six foot measure they may reposition the stone(s), complete the measurement and replace the stone(s) to its original position.

A visual agreement by the opposing skips as to whether or not one of the first three stones of the end was in the FGZ, does not preclude a measurement occurring at the conclusion of the end involving the same stone(s).

Week 5 - Delivery Element # 1 – The Grip

(This lesson is best given with a rock present. You may carefully bring up one of the Junior rocks, being sure not to damage the running surface.)

How should the handle be gripped?

Hold the handle so that the middle finger is over the center of rotation of the stone with all fingers together. The handle should be resting on the pads of the fingers. Close the thumb around the other side of the handle. The sides of the handle should be held between the middle joint of the thumb and the second joint of the finger. The wrist should be held in a **high** position above the handle.

The second joint of the fingers should not be underneath the handle, nor off of the handle. Do not hold the handle tightly in a “death grip”. Do not hold the handle lightly with the fingertips only.

In a proper grip, the “V” formed by the thumb and index finger will point to the shoulder that is on the side of the ice that you want the rock to curl towards.



front view of inturn



Front view of outturn

Where should the handle point on an in-turn?

The handle at 10 o'clock for right-hander's in-turn (2 o'clock for left-hander's in-turn)

Where should the handle point on an out-turn?

The handle at 2 o'clock for right-hander's out-turn (10 o'clock for left-hander's out-turn)

Where should the handle point on release? Why?

The handle should be at 12 o'clock upon release. This insures that the rock will be delivered in the direction of the release and avoids turning the rock to either side.

When should the handle move to 12 o'clock? Why?

This movement should start roughly 3 feet before release of the handle.

This insures that a rotation or “turn” is applied to the release. Bring the rock to 12 o'clock too early will result in little or no turn - a “lazy” handle.

Week 6 - Delivery Element # 2 – The Stance Position

How to approach the hack? Why?

Always walk into the hack from the rear.

This enables you to get the body (feet, knees, hips, shoulders, etc.) in the right position. It also helps you visualize the imaginary line that runs from the broom at the other end to the stone you are about to deliver.

Where do you place the hack foot and sliding foot? Why?

Place the ball of the hack foot squarely on the cross-hairs of the hack, with the toe pointed in direction of the forward slide.

If the foot is too low, it may slide back when pushing off and reduce the weight that you can potentially generate.

The slider foot should be **flat** on the ice parallel to the hack foot and aligned heel to toe of the hack foot.

How do you position the body?

The thigh of the hack leg should be pointed at the skip's broom along the line of delivery.

The hips and shoulders should be square to the broom. If the stance is not square to the broom, you won't slide out to the target.

The throwing arm should be comfortably extended over the hack foot knee. Keep the throwing arm elbow over the hack thigh.

Sit up straight in the hack – no slouching, twisting, or leaning forward to grab the stone.

Where do you position the stone?

The stone should be placed in front of the hack toe, along the line of delivery, or slightly towards the center line from this position, with the proper turn in place.

Where should your eyes be focussed?

ALWAYS keep your head up with your eye on the skip's broom. Don't look down.

Practical Drill: Place two cones just inside the near hog line. Line up and slide between the cones with the stone kept on the line of delivery. If the hack foot is not pointed along the line of delivery, you won't hit the cone. Try it with your eyes closed – did you slide between the cones?

Week 7 - Delivery Element # 3 – The Backward Motion

What is the purpose of the backward motion?

The purpose of the backward motion is to help develop power in the delivery.

What is the first step in the backward motion? What are the subsequent steps?

It can start with an (optional) forward press to break the stone/ice friction – **avoid** playing with the stone by moving it back and forth before you start your delivery.

The backward motion starts by raising the hips, rotating about the shoulders until the hack leg makes about a 90° angle about the knee. The shoulders should not rise. At this point the back should be roughly parallel with the ice surface.

With the stone starting to move first, the stone, hips and sliding foot are then moved **straight** back roughly 15 cm (typical).

At the end of this motion, the toe of the sliding foot is roughly aligned with the heel of the hack foot.



How far back can you go?

The further back you move your hips, the more weight you will be able to generate. Note that the sliding foot should **never** go back further than the hips.

Some players will not need to go back at all unless they are playing heavier take-out shots.

How do you know if your sliding foot is going too far back?

If you cannot take your foot out of the hack when you are at the end of your backward motion your sliding foot has gone too far back.

Week 8 - Delivery Element # 4 - The Forward Motion

What is the first step in the forward motion? What are the subsequent steps?

The forward motion begins with a forward push on the stone. This is accomplished by a slight “falling forward” or “rocking forward” body motion, **along the line of delivery** (i.e. towards the skip’s broom).

As the body falls forward, the sliding foot moves straight forward coming to rest behind the stone and underneath the body’s center of gravity (i.e. about the end of the sternum or center of the chest). Most of the body’s weight should come to rest on the sliding foot. Step towards the skip’s broom on the line of delivery.

It is acceptable to move the sliding foot early behind the rock before there is significant forward motion of the body.



At what point in the forward motion is the maximum weight generated?

As the body moves forward and the sliding foot comes into place, the hack leg approaches a 90° angle about the knee. This is where the maximum push is made with the hack leg out of the hack. (Pushing either earlier or later than this point reduces the maximum weight that can be generated).

A slightly longer hesitation in bringing the sliding foot underneath the body will increase the maximum weight that can be generated.

What else should you remember in the forward motion?

During the entire forward (and backward) motion, the grip and position of the brush (or stabilizer) should remain unchanged. The head should remain up with eyes on target.

Strive for smooth fluid motions. Do not **jump** out of the hack.

When can you abort your forward motion without losing your shot?

A player can recommence the delivery as a result of his/her own team’s action, the player may do so providing the **stone** has not reached the near tee line.

Week 9 - Delivery Element # 5A – The Slide

What is the key to a proper slide?

Balance and a slide along the line of delivery.

How should the throwing arm be positioned?

The arm should be bent with elbow down and comfortably against the body.

Where does the line of delivery start and end?

The line of delivery extends from the hack foot toe to the skip's broom.

What is the importance of the line of delivery?

The stone and the sliding foot should move along the line of delivery to insure "hitting the broom".

How should the body be positioned?

The head and body should be in a relaxed upright position, with the hips low. The shoulders should be higher than the hips with the back straight or slightly arched up. The shoulders and hips need to remain square to the ice – **no twisting**.

Where should the sliding foot be positioned?

The sliding foot should be behind the stone, on the line of delivery, and directly below the body's center of gravity. It should be flat on the ice. Pointing the toe out (or in) about 15° or so will help with balance. The sliding knee should be under the shoulder holding your brush (stabilizer).

How do you keep the whole foot flat on the ice and avoid the "toe-only" slide?

By keeping it under the body center of gravity. Simply by pushing the foot forward or by bringing the knee (or body) back will bring the heel down.

What is the advantage of having the foot flat on the ice?

This provides a much larger platform in order to help you maintain balance, which is the key to a proper slide. It also reduces stress on the knee.

Where should the trailing leg and foot be?

The trailing leg & foot should be extended behind the body along the line of delivery. The trailing foot can be straight, turned-in or turned-out, whichever is comfortable while still keeping alignment on the line of delivery.



Week 10 - Delivery Element # 5B – Body Height during the Slide

Is it better to be high or low in the slide?

The best height is the one that you are most comfortable with and that best works for you.

The higher the slide, generally the better the feel for speed and draw weight.

The lower the slide, generally the more hit weight can be generated, since the weight generated is affected by the extension of the back leg. Also, getting your chin in close behind the stone can help with accuracy.

How far should the back leg be extended?

In a high delivery the knee of the trailing leg may be just behind the hips. In a low delivery the trailing leg may be extended almost straight back. In **all** cases the knee of the trailing leg should be **behind** the hips.



The Slide



The Release

What is the body position for proper alignment to the broom?

The stone, the sliding foot, and the trailing foot must all be sliding along the line of delivery. In this position the chin should also be directly behind the stone.

What is the non-throwing arm doing?

The position of this arm, and your brush (stabilizer), should be unchanged from the set-up/stance position.

Make sure that the brush head stays about even with the rock – **do not** let it drift backwards thus opening your shoulders and reducing your accuracy.

If you use a stabilizer, make sure that it **does not** drift backwards thus opening your shoulders and reducing your accuracy.

What about the grip?

The grip remains unchanged. Once in the slide the body remains relatively motionless.

Week 11 - Delivery Element # 6A – The Release

To refresh, how should you be holding the rock through the slide?

You should be holding the handle between the joints of your fingers and thumb with the handle at either a 2 o'clock or 10 o'clock position depending on the desired turn.

When should you start to apply the rotation to the stone?

You should start to apply the rotation to the stone about 3 feet (1 meter) before the release point (i.e. where you let go of the stone).

Should you hold on to the rock as long as you can?

There is no “right” release point (as long as it is before the hog line). It is up to you to find the point that works best for you. However, whatever your release point it is important that you maintain a consistent release point for all of your shots.

Generally the longer that you can wait, the more time that you would have to make an last minute adjustments. But if you have trouble with balance in your slide, or with generating weight, it is better to release earlier (say about the top of the house).

What part of the body is used to put the turn on the stone?

Only the wrist should be used to put the turn on the stone. This is done by rotating the wrist about the center of rotation of the stone.

Why not use the rest of the arm or fingers?

The forearm should be along the line of delivery, with the elbow pointing down. If the elbow moves from side to side, or if the wrist is low, you run the risk of introducing a sideways motion to the stone which takes it off the line of delivery.

What does the throwing arm and/or body do during the release?

As you start to apply the rotation there should be a slight extension of the throwing arm towards the skip's broom, along the line of delivery. This extension allows you to make a fine adjust to the stone's speed. Alternatively, this can be accomplished by slightly dropping the body (i.e. height of the slide).

How do you know if you released the rock along the line of delivery?

After release of the stone your hand should be extended in a handshake position

During the release, where should you be looking?

You should always have your head up and eye's focussed on the skip's broom.

Week 12 - Delivery Element # 6B - Stone Rotation

On a draw, how many times should the stone rotate down the sheet?

A stone should rotate approximately 2 1/2 to 3 times from release to stop. This is called a “positive” rotation.

On a take-out, how many times should the stone rotate down the sheet?

Regardless of delivery weight, the stone should always be given the same **rate** of rotation. In other words the release does not change with weight.

How do you prevent a stone from having little or no rotation?

Always start your delivery with the handle at the 2 o'clock or the 10 o'clock position and maintain this position until approximately one metre before your release point.

The handle should be pointing at the 12 o'clock position at the release point. Releasing past this position can cause an over-rotation and loss of accuracy.

What happens if the stone has little rotation, and why?

A stone that has little or no rotation will not curl or may curl erratically at the mercy of the ice conditions.

The stone requires a positive rotation to cause it to curl in the direction of rotation (i.e. to the left for a counter-clockwise rotation and to the right for a clockwise rotation). A stone with no rotation will run straight or snake as it grips flat sections of ice or debris.

What happens if you put too many rotations on the stone?

A stone that spins rapidly will generally run straight down the ice.

What causes a rock to lose its rotation?

A “lazy” or weak handle (i.e. little rotation) can easily lose its rotation as it grips debris or flat ice caused by pebble wear or hand and knee prints.

What can you do to prevent a rotating stone from losing its turn?

Keep the ice ahead of the path of the stone clean with light brushing.

Can you reposition your hand on the handle of the stone after letting go?

No, you can no longer “double-clutch” the stone. If you let go of the stone after it has passed the tee line, you may no longer re-grip it and release again prior to the hog line. This action is now considered to be a touched moving stone.

Week 13 - Delivery Element # 7 - The Follow-Through

What are the elements of a proper follow-through?

At the point of release the throwing hand should be extended in a handshake position towards the skip's broom with the palm of the hand perpendicular to the ice surface. The head is up and the eyes focussed on the broom. The body should be sliding along the line of delivery.

This position should be held for approximately 3 seconds after release.

What is the importance of the follow-through?

A proper follow-through helps to ensure that proper mechanics were followed throughout the delivery, particularly during release where it ensures fluid and complete arm, hand, and body motion through this critical part of the delivery.

The follow-through also gives the thrower confirmation that they released the stone at the skip's broom along the line of delivery. It also helps the skip see whether the thrower was sliding out to the broom and had a clean release or whether the thrower was off the broom and tried to compensate by throwing back at the broom.

It also shows whether the slide was well balanced. Dropping the hand immediately on the ice after release is a sure sign of an unbalanced slide, possibly caused by leaning on the stone or by a push of the stone.

Remember that hands and knees on the ice cause flat spots – not good.

Why is it a bad habit to immediately get up to sweep the stone?

If you feel you need to immediately get up to sweep the stone you are already telling yourself that you will be throwing too little weight – better to concentrate on your delivery and throw the correct weight from the start.

By attempting to get up right away you lose benefits of the follow-through which usually results in a rushed and improper release.

By feeling that you need to get up to sweep right away you are sending a signal to your sweepers that you lack confidence in them. A third sweeper does not add much more distance than two sweepers and is not worth the risk of burning the stone as you get into sweeping position.

How can you help your sweepers and skip during the follow-through?

At release you are in the best position to know if you feel that you threw the correct weight and that you delivered at the broom along the line of delivery. Communicate this to your sweepers and you skip. This is important information for them.

Week 14 – The Two-Step vs Three-Step Deliveries

What are the three-steps of a delivery?

The first step of a delivery is the raise of the hips motion.

The second step is the backward motion (see week 7).

The third step of a delivery is the forward motion (see week 8).

Th to the drive out of the hack and can be summarized as “up and forward” or “up, backward and then forward”, which had been the standard up to here in this manual.

What are the 2-step and 3-step deliveries?

The 3-step delivery employs all three steps of a delivery (i.e. “up, back, and away”).

The 2-step omits the second step backward motion (i.e. “up and away”). (Note that a 2-step may have a slight backward motion of the sliding foot.)

What are the advantages of both types of deliveries?

The 2-step delivery seeks to minimize the amount of motion in the delivery mainly so as to improve delivery accuracy. Weight is generated mainly by the push of the hack leg with an adjustment from the arm extension on release. Note that the “falling or rocking forward” motion is part of the **forward** motion of the delivery and hence is still part of the 2-step delivery.

The 3-step delivery seeks to generate more power in the delivery, particularly for take-out shots, by increasing the motion of the delivery. Note that the two basic ways to increase power are increase speed or increased motion. The movements of the 3-step delivery also help some players with timing of their delivery.

Are there other variations in the types of delivery?

Many competitive curlers are starting to use a modified 2/3-step delivery where they omit the first step (i.e. the raising of the hips). In this delivery they start in the “hips up” position.

Many will then proceed into the second step backward motion from where they proceed with the standard delivery.

Others will proceed directly into the third step forward motion from where they proceed with the standard delivery.

What is the best delivery?

All of these are legitimate deliveries. The best is the one that works for you.

Week 15 - Brushing (Sweeping) Part 1 – Stance and Direction of Motion

What is the purpose of sweeping?

To affect the stone's trajectory by causing it to travel further and to extend the point where it starts to curl (i.e. to extend the break point). This is done by reducing the friction between the stone and the ice by:

- Polishing the pebble
- Raising the temperature of the ice
- Cleaning frost & debris from in front of the stone

What should the sweepers do before the delivery of the stone?

Know the shot being called. If not sure, ASK! Know who sweeps closest to the stone.

Check the intended path of the stone prior to delivery to remove visible debris.

Where should sweepers stand when the stone is being delivered? And why?

The sweepers should start near the back line or tee line, moving forward as the player delivering starts the delivery. This ensures that the sweepers are moving forward with the stone and are ready to sweep as soon as the stone is released. It also gives them a better feel for the speed of the stone at release.

What are the standard sweeping positions/techniques for brushing?

There are two standard sweeping positions/techniques for brushing: open and closed.

In both positions the sweepers should be one on either side of the stone to allow both to get close to the stone while avoiding collisions.

In both positions, the sweepers should hold their brushes at about 1/3 way from the top and bottom of the brushes. The top end of the brush is locked against the body by the elbow of the outside arm. The lower arm is fairly stiff for effective weight transfer.

In the **open** position, the sweepers face forward using a walking/step-slide motion. The lower part of the brush is held by the hand that is inside or closest to the stone while the top part of the brush is held by the hand that is outside or furthest from the stone. Grippers **must** be worn on both feet. The sweep is typically perpendicular to the path of the stone.

In the **closed** position, the sweepers face sideways towards the stone (i.e. hips parallel to the centerline). A slider **must** be worn on the lead foot which is kept flat on the ice the entire time. The sweepers push off of their back foot, on which they wear a gripper. The hands holding the brush reverse their positions such that the lower hand is on the same side of the body as the sliding foot. The sweep is typically at 45° to the path of the stone.

Week 16 - Brushing (Sweeping) Part 2 – Sweeping for Maximum Effect

What are the THREE elements of effective brushing?

1. Good technique:
 - a. Apply pressure on the brush head
 - b. Generate brushing stroke speed
 - c. Sweep in front of the path of the stone
2. Good judgement:
 - a. Develop your ability to judge the weight of the stone
 - b. Stopwatches can be used to help develop weight judgement
 - c. Develop your ability to read the ice
3. Good communication:
 - a. Judge the weight of the stone early and communicate it to the skip
 - b. Skip/shooter should communicate the line to the sweepers
 - c. The lead sweeper should occasionally look up to assist in communication with the skip and check the stone's path
 - d. Everyone should know the shot called and if the call is changed during the shot

How should you hold the brush for maximum effect?

The brush should be held at an approximate 45° angle with the ice.

It is generally up to the preference of the sweeper whether to sweep with the brush head either parallel or perpendicular to the center line.

By combining consistent fast and hard strokes across the running surface of the stone, you will have the maximum effect.

Where should you concentrate the brushing of the rock?

Remember that only the approximately 6 inches across the running surface of the stone needs to be brushed. Don't waste your effort with very wide strokes.

You should brush in close proximity to the rock.

More than one foot away from the stone for the first sweeper on the stone significantly reduce the effect of the sweeping.

Anything else you can do to help maximize your sweeping power?

Keep your brush heads clean. Dirty or worn fabric significantly reduces your brushing power.

Week 17 - Brushing (Sweeping) Part 3 – Legal vs Illegal Sweeping

Forget what you see on TV and remember your Curling Code of Ethics.

Brushing rules have been put into place to ensure fairness of play and to prevent cheating, however they are also the most difficult to enforce. Curlers must take it upon to respect these rules the same way they would the other rules of the game.

In what direction must the brushing motion be?

The brushing motion may be in **any** direction relative to the stone's movement, **as long as there is brush head movement** in the sweeping motion.

Do you have to sweep the entire width of the stone?

You do not have to sweep the entire width of the stone. You may now “corner sweep” a stone as long as there is brush head motion.

Where should the final sweeping motion end?

The final sweeping motion shall finish outside the path of the stone.

Why is this?

The sweeping motion **shall not** leave any debris in front of a moving stone.

What is the penalty for illegal sweeping?

In club play, the sweeping team must declare its own violation, all stones shall be allowed to com to rest before any action is taken. At this time the non offending team has the option of:

- a) allow the play to stand
- b) remove the unfairly swept stone from play and replacing all affected stones as close as possible to their original position
- c) placing the unfairly swept stone and stone(s) it would have affected where they would have come to rest had the sweeping violation not occurred.

Week 18 - Brushing (Sweeping) Part 4 – Past the Far Hog Line

Who can sweep one of your stones up to the tee line?

Between the tee lines, all members of the delivering team may sweep any of their team's stones in motion.

Who can sweep one of your stones past tee line?

Behind the tee line at the playing end, only one player from each team may sweep at any one time. This may be any player of the delivering team, but only the skip or vice-skip of the non-delivering team.

Behind the tee line, a team has first privilege of sweeping its own stone but it must not obstruct or prevent their opponent from sweeping.

Who on the non-delivering team can sweep a stone set in motion?

Only the skip or vice-skip of the non-delivering team may sweep their team's stone(s) after it is set in motion.

Important: Remember that the vice-skip is the player designated to take the skip's place in the house, not necessarily the third.

When can a non-delivered stone be swept?

A stationary stone must be set in motion before any sweeping can occur.

When can the lead or second sweep beyond the tee line?

The only time a lead or second of the delivering team may brush behind the tee line is when sweeping/brushing their team's stones that are in motion.

When can you sweep an opponent's stone?

An opponent's moving stone **shall not be swept** until the **front end** of the stone reaches the farther **tee line** and sweeping shall only take place behind the tee line.

Can you change your brush during a game?

At the start of each game, each player shall declare what type of sweeping device that they will be using for the duration of the game (brush, synthetic straw style broom or corn/straw broom). Players may change or exchange brushes, brush heads and synthetic straw style brooms during a game. Players shall use the same corn/straw broom for the duration of the game and shall not exchange with another player for a brush or synthetic straw style broom.

Week 19 -Types of Shots Part 1 – Draw Shots

Define the following types of draw shots:

- Guard*** A stone that is placed in a position so that it may protect another stone.
- Corner guard*** A corner guard is a guard that is short of the house and off to the side of the centerline.
- Come around*** A come around is any draw shot that curls around another stone.
- Raise*** The tapping back of a stationary stone, generally closer to the tee.
- Tap back*** A raise not necessarily intended to promote the stationary stone closer to the tee.
- Freeze*** A freeze is a draw that comes to rest touching another stone.
- Corner-freeze*** A corner-freeze is a freeze that comes to rest off center of another stone.

Why does draw weight change during a game?

Ice conditions will change during a game. Freshly pebbled ice will be slower and will require some extra weight for a given draw. After a couple of ends, the ice will speed up and less weight will be required for that shot. After a few more ends the ice may wear and more weight will be required again.

What can cause draw weight to differ from day to day?

The ice temperature, the air temperature and humidity, and the pebbling technique.

Why is the ice faster when the ice or air temperature is higher?

For the same reason that vigorously brushing a stone will make it go further, the friction of ice decreases when its temperature is higher.

How do you determine the weight of a tap back?

When throwing tap backs, remember that to tap a stone back a given distance, your shooter must be thrown hard enough to travel that distance all by itself plus a little more. The greater the angle of the tap back, the greater the additional weight required, since a straight tap back will transfer more energy to the stationary stone than one hit on an angle where the shooter retains some of its energy as it rolls away.

What is the secret to establishing consistent draw weight?

Practice, practice, practice!

Week 20 - Types of Shots Part 2 – Takeout Shots

Define the following types of takeout shots:

- Peel*** A peel weight shot is a takeout thrown with very hard weight to remove stones from play and the shot stone is not expected to stick around. (Undisturbed peel weight shots should hit the back wall and bounce back several feet – but catch them anyways.)
- Normal*** Normal weight is a takeout thrown with enough weight to firmly remove another stone. (It takes about 9.5 – 9.8 seconds for a normal take-out weight shot to travel between the hog lines.)
- Board*** Board weight is a takeout thrown with enough weight to firmly remove another stone. Because it has less weight than normal weight, it is more likely to stick around if it hits the target stone off centre. (A board weight takeout undisturbed should come to rest at the back board.) This weight is also sometimes called “bumper weight”.
- Hack*** Hack weight is a takeout thrown with enough weight to gently remove another stone. (A hack weight takeout undisturbed should come to rest at the hack.)
- Tick*** A shot intended to make a glancing contact with another stone so as to move it sideways but to keep it in play. For example, this shot could be used to move a free guard stone out of the way without removing it from play (which would require its replacement.)
- Hit & Roll*** A hit and roll is a takeout that, after making contact with another stone, rolls to a designated place.

What if your skip asks for control or regular weight? What does he mean?

There is no set definition of normal, control or regular weight. This must be established between the skip and his team mates before the game to avoid confusion. This is why using the distances above helps to establish the asked for weight.

What extra responsibility do the sweepers have when playing take-outs?

When take-outs are played, especially high weight take-outs, it is the sweepers' responsibility to catch any stones that travel off to the sides “out of play” so that they do not bounce off of the side boards and hit stones that are in play, or if there are no side boards, so that they do not travel into the game on the adjacent sheet.

Week 21 - Timing of Stones Part A – Fast Ice vs Slow Ice

How can you judge the speed of the ice?

The time it takes a draw shot to travel down the ice is a measure of the speed of the ice.

Often stopwatches are used to help gauge the speed of the ice. By measuring the time it takes the stone to travel the length of the ice or between specific lines, you can determine how fast or slow the ice is and judge relative changes in the ice speed.

Is 27 second ice faster or slower than 25 second ice?

The higher the number, the faster the ice (i.e. 27 seconds is faster ice than 25 seconds). This may seem counter-intuitive but the terms fast and slow refer to the ice conditions and not the rock speed.

(When the ice is slow it means that the friction is high and the stones decelerate quickly. Therefore to throw a stone a given distance one needs to release it with a relatively high speed. Because the initial speed is higher the stone travels the distance quickly and slows to a stop quickly. On fast ice the friction is lower and the stones do not decelerate as quickly. Therefore, in order to cover the same distance the stone can be released with a much lower speed since it will take a longer time to slow down and come to a stop. Hence low times mean slower ice and high times mean faster ice.)

What would cause ice speed to be different?

In the early ends of a game, the ice may be frosty or may have a fresh uneven and irregular pebble. This means more friction.

As the game continues, the pebble becomes more regular and the sweeping removes most of the frost so the ice gets faster.

Draw times (backline to tee line) at the beginning of a game may be 19 to 24 seconds and increase to 22 or 27 seconds toward the middle ends.

Later in the game the draw times may get slower again due to wear, or flattening, of the pebble caused by foot and stone traffic and sweeping. Flat ice equals higher friction.

Why is the ice speed sometimes different across the sheet?

A faster track is created down the centre of the sheet. An area approximately three feet on either side of the centreline is usually faster than the outer edges. The reason for this is that most stones travel down this fast-track area, smoothing out the pebble as they go. This effect is further magnified by the polishing of the ice due to sweeping.

Shots thrown on the outer edges can be several seconds slower than the centre track.

Week 22 - Timing of Stones Part B – Judging How Far the Stone will Travel

How can you use a stopwatch to determine the speed of the ice?

Timing helps judge relative ice speed and thus helps you respond to changes in the ice surface during a game. It also helps you judge ice speed at other club's relative to your own club. Try to get a "sense" of draw weight first. Use stopwatch times to enhance your skills.

What would you time to judge the speed of the ice?

Measuring the time that draw shots take from back line to stop can help to determine changes in the ice condition.

Pointe Claire ice is typically about 27 seconds from back line to tee line draw.

A time of 24 seconds would indicate slower ice implying that more weight is needed for this shot.

A time of 30 seconds would indicate faster ice implying that less weight is needed for this shot.

How can brushers use a stopwatch to know whether to sweep?

For brushers, back line to **near** hog line can help determine whether a stone needs to be swept or not. These are called split times.

Typical back line to near hog line times on normal Pointe Claire ice:

3.3 seconds	-	Back line
3.5 seconds	-	Draw Weight
3.7 seconds	-	Guard Weight
4.0 seconds	-	"Sweep"

What factors affect accurate split timing?

Consistent split times depend on consistent releases and release points. A push or pull back on a release could invalidate the split time. Also, delivery variations between players means that one split time does not fit all. So use the split time as an aide but also develop an innate sense of judging the speed of the stone.

Can you use timing to help with take-out shots?

Yes. Time take-out shots between the hog lines. If you do this in practice it will help your team develop consistent take-out weight. Depending on the team and ice conditions a typical time for normal take-out weight is between 9.5 and 9.8 seconds. Control weight is over 10 seconds and peel can get below 9 seconds.

Week 23 - Signalling *(courtesy of Norm Danylo)*

A rink can be a noisy place so you and your team should agree to a few signals. There are no rules that say that signals must be given a certain way. Many teams will make their own signals to suit their needs. But there are a number of standard signals that all curlers will recognize. Here are a few:

How can you be sure that everyone understands what shot is being called?

You should tell the members of your team that if they are unsure as to what shot you have just called for, they should stand up in the hack; when the shooter does stand up in the hack, repeat your request. The two sweepers should converse with the thrower and ensure they all know what the call is.

As skip, what can you do to visually explain your requested shot?

The first part of your signal should be a "pantomime" description of the results you expect from the shot; the second part of your signal, not required at all times, should indicate the force or weight you expect the shooter to use.

How would you call for a draw or guard?

First, pat the ice where you expect the stone to come to rest, then move the broom to where you think the shooter should aim for and indicate the turn to use by raising the appropriate hand. The shooter should know the weight to use or discuss it with the sweepers.

How would you call for a raise?

A raise is used to promote one of your rocks. Tap the stone that you wish to promote, and signal a raise by holding the broom in two hands and parallel to the ice surface. You can then indicate where the raised stone should end up. Finally place the broom where the shooter should aim and indicate the turn.

How would you call for a takeout?

First touch the target stone and indicate a take out with a sweeping motion towards the back. If you want the shooter to stay, roll behind a guard or even go out of the house, indicate that too with the appropriate motions. Place the broom where the shooter should aim and indicate the turn.

What additional information is required for the takeout shot?

Since this is a take out, there is a second part to the request, the weight or force of the stone. Indicate this by yelling the weight (hack, board, regular, control or peel) or, by touching your arm at the shoulder (heavy), the elbow (medium) or the wrist (light). You'll soon develop your own signals for weight.

Week 24 - Strategy & Tactics Part 1 – An Introduction

What is strategy; what is tactics?

Tactics is what you do to achieve something now – it is your shot call.

Strategy is what you do to achieve something in the future – it is your sequence of shots, your approach to an end, to a game.

Strategy is the “achievement of victory through tactical positioning” – Sun Tzu

What are the main considerations that influence of your shot call (tactics) ?

1. What are you trying to achieve with this shot
2. How comfortable are you with this shot (i.e. chances of making it)
3. What are the conditions constraining the shot

Do your tactics align with your strategy?

What are the conditions that constrain the shot, and why?

1. *Free Guard Zone:*

The FGZ allows each team to set up guards at the start of the end to help initiate offensive play. Do you take advantage of the FGZ?

2. *Rock Advantage:*

The hammer advantage is a main determinant on how a team plays an end. Do you only try to score with last rock advantage? Do you like to steal?

3. *Abilities (yours and theirs):*

Play the shots that your team is best at playing. Force your opponents to play shots that they are not so good at. Remember that **all** players have good and bad days. How are you playing today? How are they playing today?

4. *Ice Conditions:*

What is the ice doing? Teams that can read ice have a big advantage. Where are the runs, the flat spots, the fast and slow tracks, where is the break, is the ice man sculpting the ice? How is the ice (eg. speed) changing during the game? Straight ice generally helps with hitting. Swingy ice generally helps with come arounds.

5. *Score:*

Is the game close – what are you going to do? Are you down in points – is it time to get offensive? Are you up in points – is it time to get defensive?

6. *End:*

How are you going to play at the beginning of the game – do you want to start cautiously and see how it goes, how is everyone feeling today, or do you feel it's a good time to gamble? How are you going to play the middle ends? Do you use

the second last end to set up the last end? How are you going to play the last end? Are you running out of ends – time to get offense or time to protect? This is called “scoreboard management”.

7. *Number of Rocks Left in the End:*

How do you want to play lead’s stones, second’s stones, third’s stones? What shots do you want to leave for the skip? If the end is going badly, when do you bail? When do you “go for it”? *Remember that we don’t count the points until the last stone is thrown!*

8. *Number and Position of Rocks in Play:*

This is the main strategic tool that a team can influence during the course of an end. Depending on your strategy, how many stones do you want in play when it is the skip’s time to deliver, where do you want them? Do you think about this, or do you let what happens happen?

What kinds of strategies are there?

There are two basic strategies which define either end of a spectrum of strategies. These are commonly called: (a) Offensive Strategy, and (b) Defensive Strategy.

What is an Offensive Strategy?

The goal of this strategy is always to score as many points as possible. This strategy results in lots of rocks in play – so lots of guards, draws, finesse (down weight shots).

What is a Defensive Strategy?

The goal of this strategy is to limit the amount of points scored (by your opposition). This strategy results in few rocks in play – so lots of take-outs, hit-and-rolls, doubles (up weight shots). The defensive strategy is a big part of scoreboard management.

What is the Best Strategy?

The best strategy is the one that makes best use of the tactics that the team is good at playing. Play to minimize your mistakes. Play to take advantage of the breaks that you get. (At an advanced level, strategy is about forcing your opposition into mistakes and then exploiting them).

When is Strategy important?

Strategy is important when your shot making is “good enough”.

Week 25 - Thoughts on Basic Strategy *(based on contribution from Norm Danylo)*

How would call the first stones when you have the hammer?

If your team has the hammer, it means you will be throwing the very last rock of the end.

A common strategy is to try to score more than one point. However, if you are protecting a big lead or trying to get hammer for next end, then a blank is fine too.

Wouldn't it be nice if all you had to do with your last stone is a simple draw to the house without any stone in the way, or make an open take-out?

If you decide to play defensively, then call your first shots to be to the corners, either in or just in front of the house. Later, you can draw some shots behind those guards to try to score more than one point. Force the play to the sides.

If you decide to play offensively, then call your first shots to be corner guards out in front of the house. Use these guards to draw behind later in the end. Force the play to the sides.

If your opponent places guards on the centre line, get rid of them (when you can), or at least replace them with your own that can be promoted later. Try to keep the centre of the ice open for your last shot.

Consider blanking the end with the hammer if it is not possible to score more than one point. It all depends on your strategy.

How would you call the first stones when you don't have the hammer?

Common strategies are to either steal one or more points or to force your opponent to score only one point.

The best way to steal a point is use guards to protect or shot rock. If you can't get guards up consider using backing.

If your strategy is to steal, start the end by placing guards on the centre line about 4 to 8 feet in front of the house. Later in the end you can come around the center junk and place your stones into the 4-foot.

If your strategy is to force, start the end by drawing into the 4-foot so as to keep the front clean.

If it looks like the opposition is going to score one, then consider playing a shot to limit the damage. It's always better to let the opposition score one or two than two or three or more. You can go to the next end with the hammer and start again,

(continued over)

How do you avoiding three and four-enders against you?

After the second's stones have been thrown, you can usually tell if things are proceeding according to plan or if a disaster is in the makings.

If you are in control, great, but, if your third is about to throw his/her first stone and the opposition is sitting four stones in the house to your zero stones, consider mitigating shots.

Look for opposition stones that can provide a good pocket (backing) for you to draw to. Ask for "safe" shots that will give you a chance to leave your stone in the house.

A come around draw can really be of help to you at this point. Ensure that your third knows that it is better to be short of the house rather than through the house; you might then be able to promote that stone.

How do you learn from your mistakes?

So, despite all, the opposition has scored more than you and you are sitting in the lounge with your team and «them»!!

This is a good occasion to discuss the game with your team and with the opposition, without belabouring the issue. We can all learn from the expertise of others as well as from our mistakes.

Week 26 – FGZ Opening Tactics (based on contribution from Ron McKay)

It is the lead stones that set the strategy for the end, therefore these are important shots!

What are some opening tactical options if you don't have last stone?

Here are three basic choices without hammer:

The *center guard* 4 - 8ft out front of the house is the most common tactic for an offensive strategy. This strategy is used if: you are down in the game and you need points; the ice is swingy, your team's forte is the offensive game, the opposition's forte is not the offensive game (eg. they are weak on the draw).

The *draw to the four foot* in front of the tee-line is a common tactic for a defensive strategy. This strategy is used if: you have a lead that you would like to protect, the ice is straight, your team's forte is the defensive game, the opposition's forte is not the defensive game (eg, they are weak on the hit).

If you are ultra-defensive (i.e. big lead at the end of the game) *throwing the stone through the house* is an option. The opponent likely will counter with a corner guard. You could then opt to throw through the house again or you could draw around the opponent's guard ("the best defence being a good offence").

What are some opening tactical options if you have last stone?

Here are some choices depending on what the opposition does with their first stone:

- A. Opponent place a center guard out front of the house:
 - a. if you are offensive put up a corner guard;
 - b. if you are offensive draw around the guard and bury in front of the tee-line (but remember that you are taking the play to the center of the sheet which is what the opposition wants);
 - c. if you are very offensive split the center guard to create two corner guards (but be careful that you don't remove the center guard – remember the FGZ rule);
 - d. you may also play the split (or tick) on the center guard if you are defensive – here you are simply trying to get rid of the center guard thus preventing center cover later in the end.
 - e. if you are defensive push the opponent's guard into the house and roll over for a corner guard (again remember the FGZ rule);
 - f. if you are defensive draw into the corner of the house behind the tee line

g. if you are very defensive throw your stone through the house.

B. Opponent draws into the four-foot:

- a. if you are offensive put up a corner guard;
- b. if you are offensive you can tap the opposition stone for backing (realize that you may be committing to play in the center of the house cutting down the scoring region for you which is what the opposition wants);
- c. if you are defensive you can play a hit and roll to the corner;
- d. if you are very defensive you can play a hit and roll out.

C. Opponent throws their stone through the house:

- a. if you are offensive put up a corner guard (the opposition may throw their second stone through as well giving you the opportunity to put up a second corner guard or to draw around your first guard);

If the opposition throws their second stone through too, they may be telling you that “if you can make every shot in the end you can have two points”.

Annex A – Common Curling Delivery Faults

What's the fault?	What did you see?	Guess what caused it?	Now lets improve it
<p>BALANCE</p> <p>(correct placement of sliding foot and complete extension of the body)</p>	<p>unsteadiness</p> <p>partial extension</p> <p>excess weight on brush</p> <p>excess weight on trailing leg</p> <p>lateral drift</p> <p>hand on ice at release</p>	<p>incorrect position of sliding foot</p> <p>failure to completely extend</p> <p>incorrect position of sliding foot and incorrect use of brush</p> <p>incorrect position of sliding foot</p> <p>timing / direction of sliding foot motion</p> <p>excess leg drive</p>	<p>forward slide without stone to focus on sliding foot</p> <p>complete extension of body off the ice, on the ice</p> <p>ensure that sliding foot placed under sternum</p> <p>review use of brush above</p> <p>develop timing / direction of sliding foot</p> <p>gradual progression of acceleration</p>
<p>LINE OF DELIVERY</p> <p>(Directing the stone and sliding foot at the skip's broom)</p>	<p>lateral drift</p> <p>sliding foot beside stone</p> <p>backward motion of stone not straight back</p> <p>lateral forward motion of stone</p> <p>sliding foot not on the line of delivery</p>	<p>sliding foot under the body too fast or across the line of delivery – poor balance</p> <p>sliding foot did not delay at the beginning of the forward slide</p> <p>incorrect position of stone in the stance</p> <p>forward motion of stone not on the axis of delivery</p> <p>incorrect positioning of sliding foot in the stance</p>	<p>gradual movement of sliding foot toward the line of delivery</p> <p>sliding foot should go straight back in back swing</p> <p>ensure the sliding foot delays in the forward swing</p> <p>practice without stone</p> <p>place the stone in line with the hack foot on the axis of delivery</p> <p>see above</p> <p>positioning of the feet parallel to the axis of delivery in the stance</p> <p>practice directing the sliding foot toward a target inside the hog line without a stone</p>

(continued over)

What's the fault?	What did you see?	Guess what caused it?	Now lets improve it
<p>RELEASE</p> <p>(correct grip, handle adjustment, release motion and follow through)</p>	no rotation of stone	not enough handle adjustment (2:00/10:00) / incorrect grip early rotation of stone / lack of positive release	proper grip / recommended handle adjustment concentrate on keeping turn until 1 m from release point to develop consistent release motion and maintain handle until release / handshake follow through
	over rotation of stone	too fast a release motion / loss of balance at release over rotation of wrist and forearm / no handshake follow through	see above
	turned stone inside (outside in)	incorrect grip / incorrect follow through / too slow a release motion / not enough handle adjustment / early rotation of stone / incorrect position of stone / back swing or forward swing not along axis of delivery	see above / positive release / handshake follow through / balance at release / practice release to obtain 2.5 to 4 rotations of the stone in the length of the ice
	flipped stone out (inside out)	incorrect grip / incorrect follow through / too fast a release motion / not enough handle adjustment / early rotation of stone / incorrect position of stone / back swing or forward swing not along axis of delivery	see above
	inconsistent curl	inconsistent point of release / inconsistent or incorrect follow through / inconsistent or incorrect release motion / loss of balance at release	
	inconsistent weight control	inconsistent point of release / inconsistent or incorrect follow through / inconsistent or incorrect release motion / loss of balance at release	
	incorrect follow through	loss of balance at release / incorrect release motion / no handshake	
	missing the broom	all of the above	

Annex B – CCA Level 2 Technical Delivery Fault Correction Guide

	BAD	GOOD
GRIP		
1. Handle is held only by the fingertips	Y	N
2. Handle is held in the hand	Y	N
3. Thumb is on the side of the handle	N	Y
4. The “V” is formed by the thumb and index points to the opposite shoulder (handle at 12:00)	N	Y
5. The wrist is held high	N	Y
6. The grip is in the centre of the rock	N	Y
STANCE		
1. The hack foot is pressed into the hack (ball of the foot on the “t”)	N	Y
2. The hack foot and knee point towards the target	N	Y
3. The sliding foot lies flat on the ice surface, parallel with the other foot	N	Y
4. The heel of the sliding foot is aligned with the toe of the sliding foot	N	Y
5. Comfortable, with back straight and leaning slightly to the front	N	Y
6. Shoulders are parallel to the ice surface	N	Y
7. Shoulders and hips are perpendicular to the target (axis of delivery)	N	Y
8. The rock is on the axis	N	Y
9. The head of the brush is on the ice, aligned with the sliding foot (or the brush is on the ice)	N	Y
10. The delivery arm is comfortably straight with the elbow turned in	N	Y
11. Head is straight and eyes are on the target	N	Y
12. In-turn: rock handle at 10 o’clock for a right-hander; 2 o’clock for a left-hander	N	Y
13. Out-turn: rock is at 2 o’clock for a right-hander; 10 o’clock for a left-hander	N	Y
BACK SWING		
1. Begins with a forward push of the rock towards the target (about 10 cm)	N	Y
2. Hips are raised; hack knee keeps a 90° bend	N	Y
3. The backward movement begins with the rock followed by the sliding foot (rock.....foot)	N	Y
4. Hips and shoulders remain at the same level during this backward motion	N	Y
5. The rock remains along the axis in front of the sliding foot	N	Y
6. At the end of the back swing, the sliding foot points toward the target	N	Y
7. The grip remains unchanged (In-turn or Out-turn)	N	Y
8. The position of the handle (10 or 2 o’clock) remains unchanged (in-turn or Out-turn)	N	Y
9. Head is straight and eyes are on the target	N	Y
10a. On take-outs, at the end of the back swing, the sliding foot is on – or almost on the axis	N	Y
10b. “, “, the toe of the sliding foot is 0 to 15 cm behind the other foot	N	Y
10c. “, “, the weight of the body is on the sliding foot	N	Y
FORWARD SWING		
1. begins with forward push of the rock followed by the sliding foot	N	Y
2. For take-outs: sliding foot follows after a longer delay	N	Y
3. The rock remains on the axis in front of the hack foot	N	Y
4. At the end of the forward swing, the sliding foot is slightly open (5 to 15°)	N	Y
5. “, the sliding foot is directly behind the rock	N	Y
6. “, the delivery arm is comfortably straight, with elbow turned in	N	Y
7. “, the grip of the handle remains unchanged	N	Y
8. “, the position of the handle (10 or 2 o’clock) is unchanged	N	Y

(continued over)

	BAD	GOOD
DELIVERY		
1. The sliding foot is in the centre of the body (front view)	N	Y
2. The sliding foot is between the stomach and the chest (side view)	N	Y
3. The sliding foot is directly behind the stone	N	Y
4. The rock remains in line with the target	N	Y
5. The sliding foot remains in line with the target	N	Y
6. The sliding foot is slightly open (5 to 15°)	N	Y
7. The knee of the sliding foot is open (5 to 15°)	N	Y
8. The throwing arm bends slightly during the downward movement (approx. 150°)	N	Y
9. The throwing arm is bent too deeply (90° to 120°)	Y	N
10. The throwing arm is fully extended (180°)	Y	N
11. The elbow of the delivery arm remains turns in	N	Y
12. The knee of the sliding foot is bent too deeply (less than 60°)	Y	N
13. The knee of the sliding foot is not bent enough (more than 90°)	Y	N
14. Hips are parallel to the ice	N	Y
15. Shoulders are parallel to the ice	N	Y
16. Shoulders face towards the skips broom (perpendicular to the axis)	N	Y
17. The brush position is correct	N	Y
18. Shoulders are at the correct height (back straight or slightly bent)	N	Y
19. Shoulders are too high (back is almost vertical)	Y	N
20. Shoulders are too low (upper body leans against the ice)	Y	N
	N	Y
21. The trailing foot slides along the axis		
22. The trailing foot is turned in or is straight	N	Y
23. The trailing foot is turned out	Y	N
24. The trailing leg is straight or slightly bent	N	Y
25. The knee of the trailing leg lies heavily on the ice	Y	N
26. The grip remains unchanged (In-turn or Out-turn)	N	Y
27. The position of the handle remains unchanged (In-turn or Out-turn)	N	Y
28. Head is straight and eyes are on the target	N	Y
RELEASE		
1. The turn is given by the wrist (not by the fingers)	N	Y
2. In turn: the stone delivery – wide or narrow – is caused by the extension of the release arm	Y	N
3. In turn: the stone delivery – wide or narrow – is caused by the release	Y	N
4. In turn: the stone delivery – wide or narrow – is caused by the extension of the release arm	Y	N
5. In turn: the stone delivery – wide or narrow – is caused by the release	Y	N
6. Smooth extension of the release arm, with the elbow turned in	N	Y
7. Arm extension begins at the shoulder	Y	N
8. Over extension of the release arm	Y	N
9. The turn is given over the last metre	N	Y
10. The turn is given too early (more than a metre before release)	Y	N
11. The handle position is at 12 o'clock (both In-turn and Out-turn)	N	Y
12. The rock rotates 2.5 to 4 revolutions down the ice	N	Y
13. The wrist stays high	N	Y
14. At the point of release, the “V” still points towards the opposite shoulder	N	Y
15. Head is straight and eyes on the target	N	Y
FOLLOW-THROUGH		
1. The delivery continues for at least 3 seconds	N	Y
2. The wrist stays high	N	Y
3. The eyes and the release arm and hand still aim toward the target	N	Y
The “V” continues to point towards the opposite shoulder	N	Y

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