

Biathlon British Columbia's First Shots! Program Manual



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Introduction

What is Biathlon British Columbia's First Shots! Program?

Biathlon British Columbia (Biathlon BC) has developed the First Shots! Program to help introduce new participants to biathlon. It is a progressive program that focuses on developing biathlon shooting skills using electronic biathlon (E-biathlon) systems. The primary E-biathlon system used by Biathlon BC is the EcoAim CBR500 biathlon system, however the principles of this program can be applied to any E-biathlon system, air rifle or even 0.22LR biathlon program.

The First Shots! program is not a competitive program, although competition in the form of challenges, contests and games designed to engage the participants and to challenge them in applying newly developed skills. This program can be run as either a shorter 4-week version, or an extended 6-week version. The first four sessions of the 4-week and 6-week versions are identical. The 6-week version further builds upon fundamentals taught in the 4-week version. Both versions are structured around 60min individual sessions and can be adapted for dryland or on-snow programs. Organizations should also be aware that this program includes no instruction of ski technique, and that they should offer separate sessions aimed at developing aspect portion of the sport.

What are the overall goals of Biathlon BC's First Shots! program?

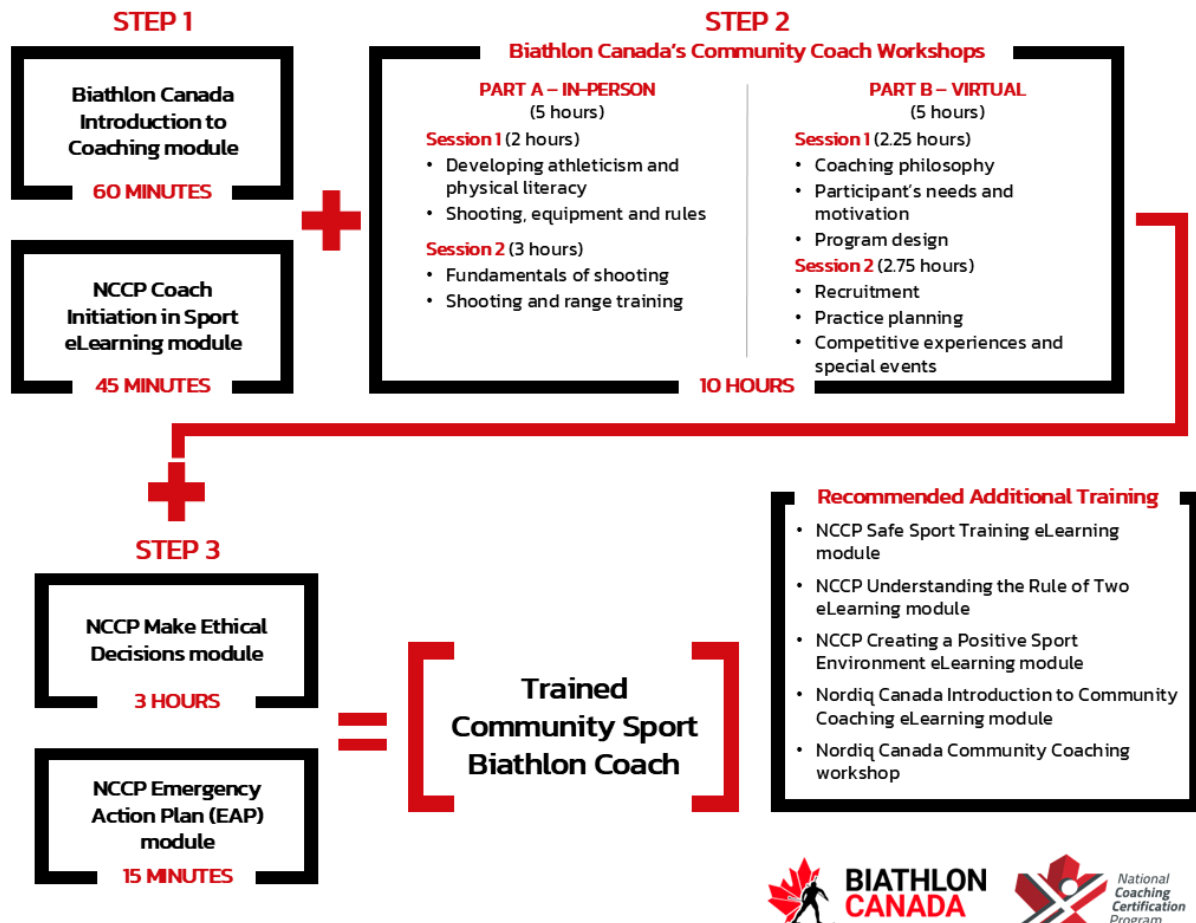
The goals of Biathlon BC's First Shots! program are as follows:

- Develop safety awareness and teach safe rifle handling habits
- Develop safety awareness and teach safe biathlon range habits.
- Develop confidence in a fun-based learning environment.
- Teach the basics of biathlon-style shooting.
- Learn through games and active biathlon-style sessions.

Biathlon BC's First Shots! program provides comprehensive lesson plans that can be used to deliver an introductory biathlon program, but it does not replace formal coach training for program leaders. Biathlon BC's First Shots! program is best led by coaches who have completed Biathlon Canada's National Coaching Certification Program Community Coach Training. The Biathlon Community Coach pathway includes a blend of online and in-person coaching modules. Biathlon BC can help assist with coordinating and organizing community coaching modules. All coaches should register for a current Biathlon Canada license for personal liability insurance purposes.

Biathlon Canada Community Coach Pathway

Here is the outline of Biathlon Canada's Community Coaching pathway. Coaches who complete the training will gain the understanding of the sport of biathlon, the equipment used, and the fundamentals of shooting technique. They will also learn the organizational skills necessary to deliver community based introductory programs such as Biathlon BC's First Shots! program.



Biathlon BC's First Shots! 4-Week Program

4-Week Program Session 1 – Introductory Session

Objectives:

- Introduce the equipment used in biathlon.
- Learn best practices for range safety.
- Introduce shooting from the prone position off a rest.
- Introduce correct sight picture.

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Printed Precision Scoring Target (Figure 1)
- Magnetic sight picture tool or printed Correct Sight Alignment (Figure 2)
- Rubber chicken
- Stickers/whiteboard/markers
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles including the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants. Appendix A includes a sample diagram of an EcoAim range setup.
Start of practice	Participants arrive	It is a good idea to have a list of expected participants on hand to take attendance.
Activity 1 5min	Introductions and Ice breaking activity	Start off the first practice with group introductions. Have each athlete, coach and parent present introduce themselves. Any type of icebreaker game can be used to facilitate the introductions. <u>Sample icebreaker:</u> Chaos Chicken Toss Begin with one rubber chicken. Say your name and then it to someone else. The person who is now holding the chicken should repeat your name, then say their name and toss the chicken to someone new. Pass the chicken around the group, making sure each person is passed the chicken. To make it harder, you can introduce a second chicken.
Activity 2 10min	Safety Review	1. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. It is best to have the range marked

		off with cones, and the targets set such that it isn't possible to ski behind the targets. Participants should understand that they should not cross the firing line during practice. 2. Range Behaviour. Shooting ranges are not places for horseplay. 3. Range Commands. Explain "Range Open", "Range Closed" and "Ceasefire." a. Range open → Shooting is permitted and it is prohibited to go down to the targets. b. Range closed → Shooting is not permitted, all EcoAim rifles should be removed from the firing line, and it is permitted to go down to the targets. c. Ceasefire → Emergency command to cease all firing. All participants must stop what they are doing and step away from the EcoAim rifles. 4. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 5. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles). C – Control the muzzle direction at all times, pointing it in a safe direction. T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 3 5min	Equipment Introduction	EcoAim Rifles: 1. Rifle stock, including the cheek piece, butt plate, pistol grip and forestock. 2. Rifle Sights, including the front sight (two fixed rings) and the rear sight. 3. Rifle Action, including the muzzle (camera), trigger and bolt (demonstrate how to operate the bolt) EcoAim Targets: 1. Target Lights - Black Target: This is the target you aim at. - Green Targets: Indicates a hit. - Red Targets: Do not shoot at red targets. Indicates a miss or the target is not ready to shoot at. 2. Direction of shooting. Demonstrate the correct order to shoot at the target. Biathlon BC recommends setting the targets to shoot from Left to Right (Alpha→Echo) EcoAim Display

		1. Trace line: The line indicates where the muzzle is aimed and how the rifle moves on target. 2. Impact: A black circle will indicate where the shot impact was on the target. 3. Scoring system: Explain how shots closed to the center of the target will have a higher score, and after 5 shots, a total score is given. Refer to figure below. Refer to Figure 1 for a printable scoring target. Rifle Rest 1. Demonstrate how to use the rifle rest, including how to carefully pickup and put down the EcoAim rifle.
Activity 4 5-10min	Teaching prone position	Position on the mat 1. Form small groups for each rifle and have them take turns going on the mat into position. One can ski a short loop, while the other shoots. Focus on getting into position properly while the have “free play” with the rifles. 2. Demonstrate how to lie down on the mat in prone position. 1. Legs are laying in an “L shape”, legs are straight and the inside step of the foot is flat on the ground. 2. One leg should be parallel to the barrel, while the other is out to the side. 3. Both hip bones are flat on the ground. 4. The spine and shoulders form a “T-shape.” There should be no twist in the spine. 5. The butt plate should sit tightly into the right shoulder for right-handed shooters, left shoulder for left-handed shooters. 6. The right arm should wrap around the rifle, and the right hand is on the pistol grip. The right index finger goes on the trigger. This is reversed for left-handed shooters. 7. The left hand grips the forestock for right-handed shooters, and opposite for left-handed shooters. 8. Elbows create a tripod on the ground. 9. The cheek rests on the cheekpiece, and the right eye is as close as possible to the rear aperture. This is reversed for left-handed shooters. 3. Have each participant practice entering and exiting position four times and try shooting 5 shots across on their last time entering position. Teaching Tip: Turn off the rifle unit if you want the athletes to pay attention instead of shooting the rifle.
Activity 5 10min	Teaching Sight Alignment	Sight Alignment 1. Refer to Figure 2 for a diagram on correct sight alignment 2. Give each participant 2 cone disks. 3. Have participants hold one disk in each hand.

		4. Reach one hand out far in front of body towards the target to encircle the target (Front sight) and the other circle close to the face (rear sight). 5. Instruct to line up the holes in the cones to create concentric circles with the target in the center of the far disk, and the eye in the center of the near disk. 6. Refer to the front and rear sights on the rifle while demonstrating with cone disks.
Activity 6 5-10min	Shooting practice	1. One shot rotation: Have the athletes practice entering prone position, and shooting one shot on target, then exiting prone position. Rotate through all the athletes. 2. Five Shots across rotation: Each participant practice entering prone position, and shooting five shots across, then exiting prone position. Rotate through all the athletes.
Activity 7 10min	Game: Green Out	Purpose: To have fun while shooting biathlon targets and to see who can shoot a "Green Out" (all five targets are green). 1. Duration: 1-5min 2. Precursor: 25% hit rate in practice 3. Aiming Point: EcoAim Target 1. Under 11: Target size 3 or larger 2. Under 13: Target Size 6 or larger 4. Number of shots: 5 5. Instructions: Shoot five times and see how many targets you can change to green. 1. Black target: Target to be shot 2. Red target: Missed target 3. Green target: Target successfully hit. 6. Repeat as many times as desired
Activity 8 5min	Session wrap-up	1. Congratulate everyone on their first practice. 2. Do a quick quiz on rifle parts and ask anyone if they have any questions (including parents). 3. Remind everyone about the next practice.

4-Week Program Session 2 – Prone Position and Natural Alignment

Objectives:

- Reinforce best practices for range safety.
- Introduce entering the prone position.
- Introduce natural alignment.
- Introduce Combination (Combo) shooting.

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Disk cones
- Stickers/whiteboard/markers
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles which includes the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants.
Start of practice	Participants arrive	Welcome back all participants and take attendance.
Activity 1 5min	Safety Review	1. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. 2. Range Behaviour. Shooting ranges are not places for horseplay. 3. Range Commands. Remind participants of the commands “Range Open”, “Range Closed” and “Ceasefire.” 4. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 5. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles)

		C – Control the muzzle direction at all times, pointing it in a safe direction T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 2 5-10min	Warm up	Play any active game such as “British bulldog,” tag, ultimate frisbee, soccer, hockey on skis.
Activity 3 5min	Review EcoAim Rifle Parts	In a quiz-game format, review the parts of the EcoAim rifles, including: 1. Rifle stock, (cheek piece, butt piece, pistol grip, forestock) 2. Rifle Sights (front sight, the rear sight) 3. Rifle Action (muzzle, trigger, bolt)
Activity 4 5min	Review Sight Alignment	Sight Alignment 1. Refer to Figure 2 for a diagram on correct sight alignment 2. Reinforce the importance of concentric circles 3. Repeat the disk cone drill from Practice 1 or practice looking through the rifle sights. Teaching Tip: Turn off the rifle unit if you want the athletes to pay attention instead of shooting the rifle.
Activity 5 15min	Teaching natural alignment in the prone position	Natural alignment refers to positioning the body directly behind the rifle, in front of the target you are shooting at. When correctly done, there is no bending/twisting or contorting the body to aim the rifle at the target. 1. Refer to Figure 3 for movement solutions to improve natural alignment. 2. The rifle on the rest acts as a pivot point, where all movements rotate around. 3. When trying to aim the EcoAim rifle at the target, the participant may need to pivot in the following directions to ensure a proper shooting position: 1. If point of aim is high and the shooter needs to aim downwards, shift the hips forwards towards the target. 2. If the point of aim is low, and the shooter needs to aim upwards, shift the hips backwards away from the target. 3. If the point of aim is to the right of the target and the shooter needs to aim left, pivot the hips to the left. 4. If the point of aim is to the left of the target and the shooter needs to aim right, pivot the hips to the left. Have each participant practice entering prone position and shifting position to find natural alignment.
Activity 6 15min	Combination shooting practice	Combination shooting refers to combining shooting with dynamic exercise such as skiing, running or soccer/hockey/ultimate

		scrimmages). It involves shooting with an elevated heart rate and elevated breathing rate. 1. Have the participants ski or run a short loop or engage in a short game or scrimmage. 2. After completing the loop/scrimmage, they return to the firing line and complete 5 shots on the target. 3. Provide correction on prone position and assistance with achieving natural alignment. 4. Repeat for the duration of the activity. Teaching Tips: 1. In biathlon, participants will always enter the range from the left side (when facing the targets) and exit on the right side. 2. Longer loops are more physically demanding but result in less trips to the shooting range. Shorter loops increase the number of shooting bouts but are less physically demanding. Adjust the length of the loops based on the desire to have more physical work, or more shooting bouts. 3. Large groups can be broken into smaller groups, so one group is skiing a loop, while the other is shooting. 4. Consider having a dedicated coach to ski the loops with the participants so they don't get lost.
Activity 7 10 min	Game: Simon Says	Purpose: Practice the shooting technique in a fun way with the coach providing prompts. • Duration: 5-10min • Precursor: Previous instruction on shooting technique • Aiming Point: EcoAim Target ○ Under 11: Target size 3 or larger ○ Under 13: Target Size 6 or larger • Number of shots: 5. • Instructions: ○ The coach acts as "Simon" and provides directions starting with or without the prompt "Simon says". ○ If the participant shoots without the prompt "Simon Says," they are out. ○ The winner is the participant with the most hits. Sample prompts include: ▪ Simon says take position. ▪ Simon says close the bolt. ▪ Simon says aim at the target. ▪ Simon says shoot the target and follow through. ▪ Simon says put the EcoAim rifle back on the rest.
Activity 8 5min	Session wrap-up	1. Congratulate everyone on their second practice. 2. Do a quick quiz on ACTS and ask anyone if they have any questions (including parents). 3. Remind everyone about the next practice.

4-Week Program Session 3 – Triggering

Objectives:

- Reinforce best practices for range safety.
- Review prone position and natural alignment.
- Teach triggering.

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Stickers/whiteboard/markers
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles which includes the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants.
Start of practice	Participants arrive	Welcome back all participants and take attendance.
Activity 1 5min	Safety Review	1. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. 2. Range Behaviour. Shooting ranges are not places for horseplay. 3. Range Commands. Remind participants of the commands “Range Open”, “Range Closed” and “Ceasefire.” 4. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 5. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles) C – Control the muzzle direction at all times, pointing it in a safe direction

		T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 2 5-10min	Warm up	Play any active game such as “British bulldog,” tag, ultimate frisbee, soccer, hockey on skis.
Activity 3 5min	Review correct sight alignment and natural alignment movements	In a quiz-game format, review sight alignment: 1. Four concentric circles formed with the rear aperture, front sight, front aperture and the target. In a quiz-game format, review how a participant would move to shift the natural alignment: 1. If point of aim is high and the shooter needs to aim downwards, shift the hips forwards towards the target. 2. If the point of aim is low, and the shooter needs to aim upwards, shift the hips backwards away from the target. 3. If the point of aim is to the right of the target and the shooter needs to aim left, pivot the hips to the left. 4. If the point of aim is to the left of the target and the shooter needs to aim right, pivot the hips to the left.
Activity 4 15-20min	Teaching Triggering	Squeezing the Trigger, or “triggering”, correctly involves squeezing the trigger such that there is minimal movement transferred onto the rifle, so the shot is not impacted by squeezing the trigger. Too hard of a trigger squeeze will pull the point of aim off target, resulting in a miss. Triggering is coordinated with breathing. You can think of the force needed to complete a shot on a scale of 0-100%. 0% is how much pressure is on the trigger when the trigger finger is not placed on the trigger. 50% is how much pressure it takes to move past the first trigger stage (on two-stage equipped triggers). 100% is the exact amount of pressure for the shot to be fired. The goal is to place 80% of pressure on the trigger while aiming and then squeezing the trigger to 100% when ready to shoot a hit. The trigger should not be squeezed past 100%. Follow through refers to eliminating movement of the trigger finger <i>immediately</i> after the shot is taken for about 0.5 seconds. This ensures the shot is completed without interference from athlete movement. 1. Participants take turns on the EcoAim rifles. 2. After the participants have settled into position, the coach can give directions a. When initially aiming the rifle, place a pressure of 50% on the trigger. b. After the second exhale, the pressure increases to 60-70%. c. After the third exhale, the pressure increases to 80%.

		d. At this point, the participant should hold their breath while making any final aiming adjustments, and when squarely aimed at the target, the participant can squeeze the trigger to exactly 100% (NO FURTHER). e. After the shot is fired, follow through for 0.5-1 second and repeat four more times. 3. Coaches can rotate through participants and challenge participants with holding different trigger pressures.
Activity 5 20-25min	Game: Partner combos	Form teams of two out of your participants. They will be taking turns alternating skiing and shooting. 1. One partner will ski a loop while the other is shooting. The ski loop should be an adequate length such that the skier won't arrive back to the range before their partner is done shooting, but not so long that the shooting partner needs to wait a long time for them to return. 2. When the partner who skied the loop returns to the range, they should tag off to the partner who was shooting, who then heads out to ski the loop, while the newly arrived partner gets a chance to shoot. 3. Provide feedback on both participants on how they build their prone position, if they should perform natural alignment and how well they are triggering. 4. Keep a running score of the number of hits the teams complete, or the number of points registered in each shooting bout to encourage accuracy. At the end of the activity, provide the scores for each team.
Activity 6 5min	Session wrap-up	1. Congratulate everyone on their third practice. 2. Remind everyone about the next practice. 3. Inform the group the next practice will include a series of short challenges and competitions.

4-Week Program Session 4 – Final Practice Mini-Competitions Day

Objectives:

- Reinforce best practices for range safety
- Challenge the participants on the skills they have learned through fun competitions

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Stickers/whiteboard/markers
- Notepads/clipboards/pens/calculator
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup
- Candy for prizes

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles which includes the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants.
Start of practice	Participants arrive	Welcome back all participants and take attendance.
Activity 1 5min	Safety Review	1. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. 2. Range Behaviour. Shooting ranges are not places for horseplay. 3. Range Commands. Remind participants of the commands “Range Open”, “Range Closed” and “Ceasefire.” 4. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 5. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles) C – Control the muzzle direction at all times, pointing it in a safe direction

		T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 2 5-10 min	Warm up	Play any active game such as “British bulldog,” tag, ultimate frisbee, soccer, hockey on skis.
Activity 3 5min	Review of skills required for the mini-competitions	1. Sight alignment principles 2. Natural alignment principles 3. Triggering principles
Activity 4 10-15min	10 shot Precision Score Challenge	The goal of the precision score challenge is to encourage the participants to shoot shots as close as possible to the center of the target. Shots close to the center of the target will receive higher scores than shots further from the center. The EcoAim display will automatically provide a score for every 5 shots completed. 1. Each participant should get five practice shots. Consider adjusting the zero if required. 2. Each participant has a turn to shoot 10 shots. 3. After each 5 shot sequence, record the score on the display. 4. The final score will be the total of two, five-shot sequences. 5. Be sure to record the final score of each participant. Teaching Tip: participants who are not currently shooting should be kept occupied by skiing a loop so as not to distract the participants shooting.
Activity 5 10-15min	1-shot challenge	The goal of the 1-shot challenge is to encourage the participants to get into the correct shooting position multiple times in a row. A 1-shot involves the participant entering prone position, aiming and taking a single shot at the target, and once a single shot has been taken, opening the bolt, standing up and getting off the shooting mat. The participants should complete a short ski around the perimeter of the firing line between each shot. 1. Participants first ski the perimeter of the firing line and enter the range from the left side. 2. Participants then proceed to get into prone position and take a single shot at the target. 3. Once the shot is taken, they must <u>open the bolt</u>, standup and re-ski the perimeter of the firing line. 4. When they return to the rifle, they can take their second 1-shot. 5. Participants repeat five times, and the number of total hits (out of a possible five) are recorded.

Activity 6 10-15min	Mini-biathlon challenge	The goal of the mini-biathlon challenge is to mimic a biathlon race. The challenge involves skiing three loops and shooting twice. The order is: • Ski Loop #1 • Shoot #1 • Ski Loop #2 • Shoot #2 • Ski Loop #3 to the finish There is no penalty for missing targets, but participants must shoot all five targets before they can go out and ski the next loop. To prepare for this challenge, the EcoAim displays need to be adjusted to the following setting from the Shooting Settings menu: • Shooting Mode: Penalty • Shot Count: 99 • Penalty: 1 second These settings mean that instead of having a 5-shot sequence, participants can shoot at the target up to 99 times in the sequence, or until all five targets are hit. A missed target will be red for one second, and the participant must wait for it to turn black before trying to shoot and hit it again. Depending on the size of your group, you can elect to have everyone start simultaneously and “race” to be the first one to the rifle or split the group into separate start waves. Options to run the event could be to record total times to complete the challenge, or simply to have the goal to finish the event. Consider using shorter loops (75-150m) depending on how capable the group is on skis. You can add challenge by building an obstacle course to ski through. Teaching Tip: You can make hitting the target easier or harder by adjusting the Target Size setting. Smaller numbers are easier to hit; larger numbers are harder to hit.
Activity 7 5-10min	Program wrap-up	1. Award candies for participating in all the challenges. Avoid singling out the top scores/placings only. 2. Congratulate everyone on completing the 4-week Biathlon First Shots! program. 3. Thank everyone for their enthusiastic participation. 4. Inform everyone that you may reach out about future biathlon opportunities. 5. Be present for any final questions that participants or parents may have.

Biathlon BC's First Shots! 6-Week Program

6-Week Program Session 1 – Introductory Session

Objectives:

- Introduce the Biathlon equipment
- Learn best practices for range safety
- Introduce shooting from the prone position off a rest
- Introduce correct sight picture

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Printed Figure 1 Precision Scoring Target
- Magnetic sight picture tool/Figure 2 Correct Sight Alignment printed
- Stickers/whiteboard/markers
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles including the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants. Appendix A includes a sample diagram of an EcoAim range setup.
Start of practice	Participants arrive	It is a good idea to have a list of expected participants on hand to take attendance.
Activity 1 5min	Introductions and Ice breaking activity	Start off the first practice with group introductions. Have each athlete, coach and parent present introduce themselves. Any type of icebreaker game can be used to facilitate the introductions. <u>Sample icebreaker:</u> Chaos Chicken Toss Begin with one rubber chicken. Say your name and then it to someone else. The person who is now holding the chicken should repeat your name, then say their name and toss the chicken to someone new. Pass the chicken around the group, making sure each person is passed the chicken. To make it harder, you can introduce a second chicken.
Activity 2 10min	Safety Review	6. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. It is best to have the range marked off with cones, and the targets set such that it isn't possible to

		ski behind the targets. Participants should understand that they should not cross the firing line during practice. 7. Range Behaviour. Shooting ranges are not places for horseplay. 8. Range Commands. Explain “Range Open”, “Range Closed” and “Ceasefire.” a. Range open → Shooting is permitted and it is prohibited to go down to the targets. b. Range closed → Shooting is not permitted, all EcoAim rifles should be removed from the firing line, and it is permitted to go down to the targets. c. Ceasefire → Emergency command to cease all firing. All participants must stop what they are doing and step away from the EcoAim rifles. 9. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 10. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles). C – Control the muzzle direction at all times, pointing it in a safe direction. T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 3 5min	Equipment Introduction	EcoAim Rifles: 4. Rifle stock, including the cheek piece, butt plate, pistol grip and forestock. 5. Rifle Sights, including the front sight (two fixed rings) and the rear sight. 6. Rifle Action, including the muzzle (camera), trigger and bolt (demonstrate how to operate the bolt) EcoAim Targets: 3. Target Lights - Black Target: This is the target you aim at. - Green Targets: Indicates a hit. - Red Targets: Do not shoot at red targets. Indicates a miss or the target is not ready to shoot at. 4. Direction of shooting. Demonstrate the correct order to shoot at the target. Biathlon BC recommends setting the targets to shoot from Left to Right (Alpha→Echo) EcoAim Display 4. Trace line: The line indicates where the muzzle is aimed and how the rifle moves on target.

		- Impact: A black circle will indicate where the shot impact was on the target. - Scoring system: Explain how shots closed to the center of the target will have a higher score, and after 5 shots, a total score is given. Refer to figure below. Refer to Figure 1 for a printable scoring target. Rifle Rest - Demonstrate how to use the rifle rest, including how to carefully pickup and put down the EcoAim rifle.
Activity 4 5-10min	Teaching prone position	Position on the mat - Form small groups for each rifle and have them take turns going on the mat into position. One can ski a short loop, while the other shoots. Focus on getting into position properly while the have “free play” with the rifles. - Demonstrate how to lie down on the mat in prone position. - Legs are laying in an “L shape”, legs are straight and the inside step of the foot is flat on the ground. - One leg should be parallel to the barrel, while the other is out to the side. - Both hip bones are flat on the ground. - The spine and shoulders form a “T-shape.” There should be no twist in the spine. - The butt plate should sit tightly into the right shoulder for right-handed shooters, left shoulder for left-handed shooters. - The right arm should wrap around the rifle, and the right hand is on the pistol grip. The right index finger goes on the trigger. This is reversed for left-handed shooters. - The left hand grips the forestock for right-handed shooters, and opposite for left-handed shooters. - Elbows create a tripod on the ground. - The cheek rests on the cheekpiece, and the right eye is as close as possible to the rear aperture. This is reversed for left-handed shooters. - Have each participant practice entering and exiting position four times and try shooting 5 shots across on their last time entering position. Teaching Tip: Turn off the rifle unit if you want the athletes to pay attention instead of shooting the rifle.
Activity 5 10min	Teaching Sight Alignment	Sight Alignment - Refer to Figure 2 for a diagram on correct sight alignment - Give each participant 2 cone disks. - Have participants hold one disk in each hand. - Reach one hand out far in front of body towards the target to encircle the target (Front sight) and the other circle close to the face (rear sight).

		11. Instruct to line up the holes in the cones to create concentric circles with the target in the center of the far disk, and the eye in the center of the near disk. 12. Refer to the front and rear sights on the rifle while demonstrating with cone disks.
Activity 6 5-10min	Shooting practice	3. One shot rotation: Have the athletes practice entering prone position, and shooting one shot on target, then exiting prone position. Rotate through all the athletes. 4. Five Shots across rotation: Each participant practice entering prone position, and shooting five shots across, then exiting prone position. Rotate through all the athletes.
Activity 7 10min	Game: Green Out	Purpose: To have fun while shooting biathlon targets and to see who can shoot a "Green Out" (all five targets are green). 7. Duration: 1-5min 8. Precursor: 25% hit rate in practice 9. Aiming Point: EcoAim Target 1. Under 11: Target size 3 or larger 2. Under 13: Target Size 6 or larger 10. Number of shots: 5 11. Instructions: Shoot five times and see how many targets you can change to green. 1. Black target: Target to be shot 2. Red target: Missed target 3. Green target: Target successfully hit. 12. Repeat as many times as desired
Activity 8 5min	Session wrap-up	4. Congratulate everyone on their first practice. 5. Do a quick quiz on rifle parts and ask anyone if they have any questions (including parents). 6. Remind everyone about the next practice.

6-Week Program Session 2 – Prone Position and Natural Alignment

Objectives:

- Introduce the equipment used in biathlon.
- Learn best practices for range safety.
- Introduce shooting from the prone position off a rest.
- Introduce correct sight picture.

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Printed Precision Scoring Target (Figure 1)
- Magnetic sight picture tool or printed Correct Sight Alignment (Figure 2)
- Rubber chicken
- Stickers/whiteboard/markers
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles which includes the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants.
Start of practice	Participants arrive	Welcome back all participants and take attendance.
Activity 1 5min	Safety Review	1. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. 2. Range Behaviour. Shooting ranges are not places for horseplay. 3. Range Commands. Remind participants of the commands “Range Open”, “Range Closed” and “Ceasefire.” 4. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 5. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles)

		C – Control the muzzle direction at all times, pointing it in a safe direction T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 2 5-10min	Warm up	Play any active game such as “British bulldog,” tag, ultimate frisbee, soccer, hockey on skis.
Activity 3 5min	Review EcoAim Rifle Parts	In a quiz-game format, review the parts of the EcoAim rifles, including: 1. Rifle stock, (cheek piece, butt piece, pistol grip, forestock) 2. Rifle Sights (front sight, the rear sight) 3. Rifle Action (muzzle, trigger, bolt)
Activity 4 5min	Review Sight Alignment	Sight Alignment 1. Refer to Figure 2 for a diagram on correct sight alignment. 2. Reinforce the importance of concentric circles. 3. Repeat the disk cone drill from Practice 1 or practice looking through the rifle sights. Teaching Tip: Turn off the rifle unit if you want the athletes to pay attention instead of shooting the rifle.
Activity 5 10min	Teaching natural alignment in the prone position	Natural alignment refers to positioning the body directly behind the rifle, in front of the target you are shooting at. When correctly done, there is no bending/twisting or contorting the body to aim the rifle at the target. 1. Refer to Figure 3 for movement solutions to improve natural alignment. 2. The rifle on the rest acts as a pivot point, where all movements rotate around. 3. When trying to aim the EcoAim rifle at the target, the participant may need to pivot in the following directions to ensure a proper shooting position: 1. If point of aim is high and the shooter needs to aim downwards, shift the hips forwards towards the target. 2. If the point of aim is low, and the shooter needs to aim upwards, shift the hips backwards away from the target. 3. If the point of aim is to the right of the target and the shooter needs to aim left, pivot the hips to the left. 4. If the point of aim is to the left of the target and the shooter needs to aim right, pivot the hips to the left. Have each participant practice entering prone position and shifting position to find natural alignment.
Activity 6 10min	Combination shooting practice	Combination shooting refers to combining shooting with dynamic exercise such as skiing, running or soccer/hockey/ultimate scrimmages). It involves shooting with an elevated heart rate and elevated breathing rate.

		1. Have the participants ski or run a short loop or engage in a short game or scrimmage. 2. After completing the loop/scrimmage, they return to the firing line and complete 5 shots on the target. 3. Provide correction on prone position and assistance with achieving natural alignment. 4. Repeat for the duration of the activity. Teaching Tips: 1. In biathlon, participants will always enter the range from the left side (when facing the targets) and exit on the right side. 2. Longer loops are more physically demanding but result in less trips to the shooting range. Shorter loops increase the number of shooting bouts but are less physically demanding. Adjust the length of the loops based on the desire to have more physical work, or more shooting bouts. 3. Large groups can be broken into smaller groups, so one group is skiing a loop, while the other is shooting. 4. Consider having a dedicated coach to ski the loops with the participants so they don't get lost.
Activity 7 10 min	Game: Simon Says	Purpose: Practice the shooting technique in a fun way with the coach providing prompts. • Duration: 5-10min • Precursor: Previous instruction on shooting technique • Aiming Point: EcoAim Target ○ Under 11: Target size 3 or larger ○ Under 13: Target Size 6 or larger • Number of shots: 5. • Instructions: ○ The coach acts as "Simon" and provides directions starting with or without the prompt "Simon says". ○ If the participant shoots without the prompt "Simon Says" they are out. ○ The winner is the participant with the most hits. Sample prompts include: ▪ Simon says take position. ▪ Simon says close the bolt. ▪ Simon says aim at the target. ▪ Simon says shoot the target and follow through. ▪ Simon says put the EcoAim rifle back on the rest.
Activity 8 5min	Session wrap-up	1. Congratulate everyone on their second practice. 2. Do a quick quiz on ACTS and ask anyone if they have any questions (including parents). 3. Remind everyone about the next practice.

6-Week Program Session 3 – Triggering

Objectives:

- Reinforce best practices for range safety.
- Review prone position and natural alignment.
- Teach triggering.

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Stickers/whiteboard/markers
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles which includes the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants.
Start of practice	Participants arrive	Welcome back all participants and take attendance.
Activity 1 5min	Safety Review	1. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. 2. Range Behaviour. Shooting ranges are not places for horseplay. 3. Range Commands. Remind participants of the commands “Range Open”, “Range Closed” and “Ceasefire.” 4. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 5. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles) C – Control the muzzle direction at all times, pointing it in a safe direction

		T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 2 5-10min	Warm up	Play any active game such as “British bulldog,” tag, ultimate frisbee, soccer, hockey on skis.
Activity 3 5min	Review correct sight alignment and natural alignment movements	In a quiz-game format, review sight alignment: 1. Four concentric circles formed with the rear aperture, front sight, front aperture and the target. In a quiz-game format, review how a participant would move to shift the natural alignment: 1. If point of aim is high and the shooter needs to aim downwards, shift the hips forwards towards the target. 2. If the point of aim is low, and the shooter needs to aim upwards, shift the hips backwards away from the target. 3. If the point of aim is to the right of the target and the shooter needs to aim left, pivot the hips to the left. 4. If the point of aim is to the left of the target and the shooter needs to aim right, pivot the hips to the left.
Activity 4 15-20min	Teaching Triggering	Squeezing the Trigger, “triggering”, correctly involves squeezing the trigger such that there is minimal movement transferred to the rifle, so the shot is not impacted by squeezing the trigger. Too hard of a trigger squeeze will pull the point of aim off target, resulting in a miss. Triggering is coordinated with breathing. You can think of the force needed to complete a shot on a scale of 0-100%. 0% is how much pressure is on the trigger when the trigger finger is not placed on the trigger. 50% is how much pressure it takes to move past the first trigger stage (on two-stage equipped triggers). 100% is the exact amount of pressure for the shot to be fired. The goal is to place 80% of pressure on the trigger while aiming and then squeezing the trigger to 100% when ready to shoot a hit. The trigger should not be squeezed past 100%. Follow through refers to eliminating movement of the trigger finger <i>immediately</i> after the shot is taken for about 0.5 seconds. This ensures the shot is completed without interference from athlete movement. 1. Participants take turns on the EcoAim rifles. 2. After the participants have settled into position, the coach can give directions a. When initially aiming the rifle, place a pressure of 50% on the trigger. b. The coach then instructs the participants to increase the pressure to 60-70%. c. Next, the coach instructs the participants to increase the pressure to 80%

		d. Finally, the coach asks the participants to squeeze the trigger to exactly 100% (NO FURTHER). At this point a shot should be fired. e. After the shot is fired, follow through for 0.5-1 second and repeat four more times. 3. Coaches can rotate through participants and challenge participants with holding different trigger pressures.
Activity 5 20-25min	Game: Teamwork combos	Form teams of two out of your participants. They will be taking turns alternating skiing and shooting. 1. One partner will ski a loop while the other is shooting. The ski loop should be an adequate length such that the skier won't arrive back to the range before their partner is done shooting, but not so long that the shooting partner needs to wait a long time for them to return. 2. When the partner who skied the loop returns to the range, they should tag off to the partner who was shooting, who then heads out to ski the loop, while the newly arrived partner gets a chance to shoot. 3. Provide feedback on both participants on how they build their prone position, if they should perform natural alignment and how well they are triggering. 4. Keep a running score of the number of hits the teams complete, or the number of points registered in each shooting bout to encourage accuracy. At the end of the activity, provide the scores for each team.
Activity 6 5min	Session wrap-up	1. Congratulate everyone on their third practice. 2. Remind everyone about the next practice. 3. Inform the group the next practice will include a series of short challenges and competitions.

6-Week Program Session 4 – Breathing Pattern

Objectives:

- Reinforce best practices for range safety.
- Review prone position, natural alignment and triggering.
- Teach a biathlon shooting breathing pattern.

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Stickers/whiteboard/markers
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles which includes the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants.
Start of practice	Participants arrive	Welcome back all participants and take attendance.
Activity 1 5min	Safety Review	1. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. 2. Range Behaviour. Shooting ranges are not places for horseplay. 3. Range Commands. Remind participants of the commands “Range Open”, “Range Closed” and “Ceasefire.” 4. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 5. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles) C – Control the muzzle direction at all times, pointing it in a safe direction

		T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 2 5-10 min	Warm up	Play any active game such as “British bulldog,” tag, ultimate frisbee, soccer, hockey on skis.
Activity 3 5min	Review of skills from previous sessions	1. Sight alignment principles 2. Natural alignment principles 3. Triggering principles
Activity 4 10min	Teaching Breathing pattern	A 3-breath pattern involves taking 3 full breath cycles (inhale and exhale) between each shot. A 2-breath pattern only involves 2 breathe cycles, and a 1-breath pattern only involves a single breathing cycle between shots. Beginners often find a 3 or 2 breath pattern easiest to learn, especially when they are combining shooting with skiing. Typically, there are 3-6 breathes taken before shooting the first shot after skiing. While gathered in a circle, the coach begins leading the participants through a breathing pattern: 1. First pattern: In a slow, relaxed and meditative pattern → breath in, out, in, out, in, out. 2. Second pattern: In an exaggerated pattern → breathe a full deep extending breath in, full extended breath out, full deep extending breath in full extended breath out. 3. Third pattern: With a consistent, natural flow → breath in, out, in, out, in, out. 1. There should be a marked stop point with the exhale where the participant naturally stops exhaling, but with force, can uncomfortably squeeze more air from their lungs. This point is the key stopping point of the exhale in shooting. Teaching Tips: 1. By placing their hands on their chest and abdomens, there can be a better awareness of inhales and exhales. 2. There is a difference between inhaling and expanding into the chest vs expanding into the abdomen. In prone shooting, it is advised to expand into the chest.
Activity 5 15-20min	Practicing Breathing Pattern	1. Split the participants in groups, so one group is using the EcoAim rifles while the other is out skiing. 2. Have the participants get into prone position.

		3. The coach can guide the participants to breathe in and out. They should note that when they breathe in, the chest expands and results in the rifle aiming downwards. As they exhale, the chest deflates and the rifle moves upwards. 4. The coach should instruct the participants to breathe in and breathe out on a constant cadence up to three times. 5. On the third exhale, the participants should hold their breath for a moment and ensure that the rifle is aimed at the middle of the target and that it is holding still on the target. 6. Once aiming and pausing on target is confirmed, the participants can take a shot. 7. Repeat four more times using the same cadence, reinforcing the final moment of held breathe and no-movement in the rifle. Teaching tips: 1. The final moment where the participant is holding their breath and the rifle is not moving on the target is the most critical moment in shooting to achieve a hit. 2. The participant should be remembering to apply pressure on the trigger so that there is at least 80% pressure on the trigger during the final moment of holding the breath. This is the last chance for the participant to ensure they are correctly aiming at the target.
Activity 6 10-15min	Game: Partner shooting	1. Form pairs out of your participants. 2. Each pair will work together while shooting. One partner will shoot at the target while the other partner observes the progress on the EcoAim display. 3. Both partners first ski a small loop and return to the range. 4. The partner shooting should work on coordinating their breath while aiming and holding their final breath, so the rifle remains still while shooting. 5. The partner watching the display can provide feedback on how much or how little the rifle is moving before the shot. 6. After 5 shots, the partners re-ski the loop and trade places.
Activity 7 5-10min	Session wrap-up	1. Congratulate everyone on their third practice. 2. Remind everyone about the next practice.

6-Week Program Session 5 – Range Procedure

Objectives:

- Reinforce best practices for range safety.
- Review prone position, natural alignment, breathing and triggering.
- Teach range procedure.

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Stickers/whiteboard/markers
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles which includes the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants.
Start of practice	Participants arrive	Welcome back all participants and take attendance.
Activity 1 5min	Safety Review	1. Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. 2. Range Behaviour. Shooting ranges are not places for horseplay. 3. Range Commands. Remind participants of the commands “Range Open”, “Range Closed” and “Ceasefire.” 4. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 5. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing. A – Assume all firearms are loaded (even EcoAim rifles) C – Control the muzzle direction at all times, pointing it in a safe direction T – Trigger finger remains off the trigger until you are preparing to shoot.

		S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 2 5-10 min	Warm up	Play any active game such as “British bulldog,” tag, ultimate frisbee, soccer, hockey on skis.
Activity 3 5min	Review of skills from previous sessions	1. Sight alignment principles 2. Natural alignment principles 3. Triggering principles 4. Breathing principles
Activity 4 20min	Teaching Range procedure	Range procedure encompasses the process of: • Approaching the range • Selecting a target • Getting into shooting position • Exiting the shooting position • Exiting the range Being consistent in this process is a key to success in biathlon: 1. Approaching the range: 1. As skiers approach the range, they should begin to change their focus from skiing fast and hard to slowing down their heart rate and deep breathing. Approaching the range at too hard of an intensity can make shooting more difficult. 2. You can place pylons about 20m from the shooting range as teaching aids and they can be used as visual markers that they need to “slow down” and “take deeper breaths.” 3. Poles should be removed and held in 1 hand. 2. As they enter the range, they should select a target to shoot: 1. The target should be reset and functioning properly. 2. The mat should not be occupied. 3. At their shooting mat, they should get into shooting position: 1. The participant should approach the mat at an angle, rather than head on. 2. Poles should be placed either on the ground under the hips parallel to the legs, or across the top to the legs in the pocket behind the knees parallel to the target. 3. It is important to teach the participant that they must be entirely on their own mat. No body part or piece of equipment should be on a neighboring mat. 4. Once in position, the participant should immediately exit the shooting mat.

		1. Practice gently placing the rifle down and the bolt must be opened. 2. The participant should first rise to their knees and grab hold of their poles. 3. From their knees, they can stand up and exit the mat to the right, being careful not to knock the EcoAim rifle or neighbour with their skis. 5. Exiting the shooting range. 1. Once off the mat, the skier should switch from going slow in “shooting mode” to going back to being “fast on skis.” 2. The participant should initiate movement with their legs only skiing while putting their poles on at the same time. 3. You can place some pylons 10-20m from the range as a visual cue of where they should have their poles back on. Teaching Tip: In biathlon, the flow of traffic through the range is ALWAYS <u>left to right</u>.
Activity 5 15-20min	Practicing Breathing Pattern	1. Split the participants into two groups to stagger their progress through the range. 2. Have the group ski continue loops, stopping at the range to shoot on each lap to practice range procedure.
Activity 6 10-15min	Game: Two-person relay	1. Form relay teams of 2 participants. 2. The pylons you set up after the range will be the start/finish/tag area. 3. The first partner on each team will race around the ski loop before returning to the range to shoot. 4. After shooting, they will need to tag their partner, who will then ski the loop before getting a turn to shoot. 5. Skiers can alternate back and forth as many or as few times as you see fit. 6. On the final lap, after the last shoot, the participant should ski a full ski loop and race to the finish. Teaching Tip: Biathlon <u>always begins with skiing a loop and always finishes with skiing a loop</u>. Whenever leading games that involve skiing and shooting, always start with skiing a loop first before shooting, and always finish with a final lap of skiing before the end.
Activity 7 5-10min	Session wrap-up	1. Congratulate everyone on their third practice. 2. Remind everyone about the next practice and it will include mini-competitions.

6-Week Program Session 6 – Final Practice Mini-Competitions Day

Objectives:

- Reinforce best practices for range safety.
- Challenge the participants on the skills they have learned through fun competitions.

Equipment Required:

- Fully charged EcoAim rifles, targets, displays and cables
- Shooting mats
- Rifle rests
- Disk cones, pylons or V-boards
- Range signage
- Stickers/whiteboard/markers
- Notepads/clipboards/pens/calculator
- Tools to adjust EcoAim rifles
- First aid kit
- Snacks/hot chocolate, soup
- Candy for prizes

Set-up: Coach/coaches arrive early to set-up range and calibrate rifles which includes the following tasks:

- Placement of mats and rests
- Mark firing line and waiting area

Session Schedule:

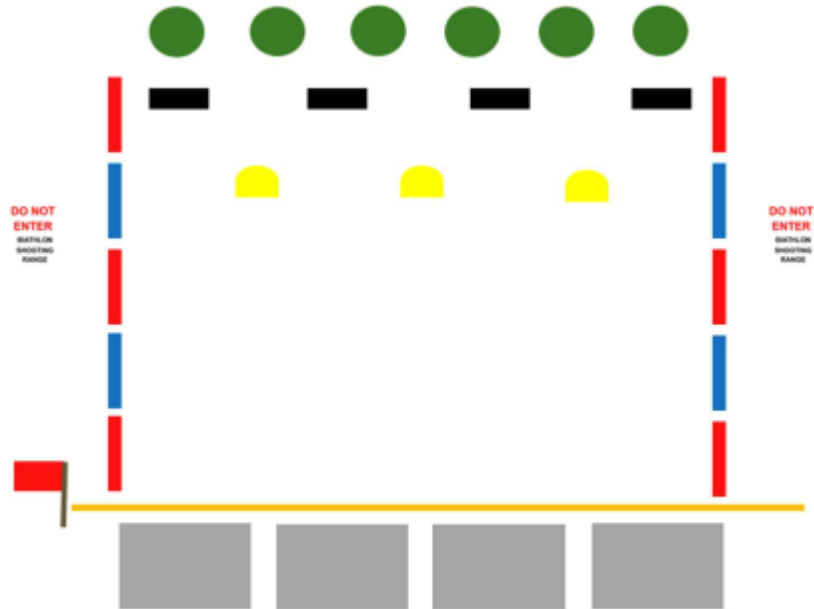
Duration	Event	Description
45min (estimated)	Coaches arrive on site and setup up equipment	It is important to arrive early to ensure that all your equipment is setup and ready for the arrival of the participants.
Start of practice	Participants arrive	Welcome back all participants and take attendance.
Activity 1 5min	Safety Review	Range Boundaries. No one should be skiing in between the EcoAim rifles and targets. It is best to have the range marked off with cones, and the targets set such that it isn't possible to ski behind the targets. Participants should understand that they should not cross the firing line during practice. 1. Range Behaviour. Shooting ranges are not places for horseplay. 2. Range Commands. Explain "Range Open", "Range Closed" and "Ceasefire." 3. Rifle Safety. All rifles, even EcoAim rifles should always be pointed up, or down range when in use. They should <u>never</u> be pointed at anyone. 4. ACTS. A nation-wide acronym for rifle safety. This is to train participants for eventual progression to live firing.

		A – Assume all firearms are loaded (even EcoAim rifles) C – Control the muzzle direction at all times, pointing it in a safe direction T – Trigger finger remains off the trigger until you are preparing to shoot. S – See that the firearm is unloaded. Open the bolt each time you are done shooting.
Activity 2 5-10 min	Warm up	Play any active game such as “British bulldog,” tag, ultimate frisbee, soccer, hockey on skis.
Activity 3 5min	Review of skills required for the mini-competitions	1. Sight alignment principles 2. Natural alignment principles 3. Triggering principles
Activity 4 10-15min	10 shot Precision Score Challenge	The goal of the precision score challenge is to encourage the participants to shoot shots as close as possible to the center of the target. Shots close to the center of the target will receive higher scores than shots further from the center. The EcoAim display will automatically provide a score for every 5 shots completed. 1. Each participant should get five practice shots. Consider adjusting the zero if required. 2. Each participant has a turn to shoot 10 shots. 3. After each 5 shot sequence, record the score on the display. 4. The final score will be the total of two, five-shot sequences. 5. Be sure to record the final score of each participant. Teaching Tip: participants who are not currently shooting should be kept occupied by skiing a loop so as not to distract the participants shooting.
Activity 5 10-15min	1-shot challenge	The goal of the 1-shot challenge is to encourage the participants to get into the correct shooting position multiple times in a row. A 1-shot involves the participant entering prone position, aiming and taking a single shot at the target, and once a single shot has been taken, opening the bolt, standing up and getting off the shooting mat. The participants should complete a short ski around the perimeter of the firing line between each shot. 1. Participants first ski the perimeter of the firing line and enter the range from the left side. 2. Participants then proceed to get into prone position and take a single shot at the target. 3. Once the shot is taken, they must <u>open the bolt</u>, standup and re-ski the perimeter of the firing line. 4. When they return to the rifle, they can take their second 1-shot.

		5. Participants repeat five times, and the number of total hits (out of a possible five) are recorded.
Activity 6 10-15min	Mini-biathlon challenge	The goal of the mini-biathlon challenge is to mimic a biathlon race. The challenge involves skiing three loops and shooting twice. The order is: • Ski Loop #1 • Shoot #1 • Ski Loop #2 • Shoot #2 • Ski Loop #3 to the finish There is no penalty for missing targets, but participants must shoot all five targets before they can go out and ski the next loop. To prepare for this challenge, the EcoAim displays need to be adjusted to the following setting from the Shooting Settings menu: • Shooting Mode: Penalty • Shot Count: 99 • Penalty: 1 second This sets the system so participants can shoot at the target up to 99 times in the sequence, or until all five targets are hit. A missed target will be red for one second, and the participant must wait for it to turn black before trying to shoot and hit it again. Depending on the size of your group, you can elect to have everyone start simultaneously and “race” to be the first one to the rifle or split the group into separate start waves. Options to run the event could be to record total times to complete the challenge, or simply to have the goal to finish the event. Consider using shorter loops (75-150m) depending on how capable the group is on skis. You can add challenge by building an obstacle course to ski through. Teaching Tip: You can make hitting the target easier or harder by adjusting the Target Size setting. Smaller numbers are easier to hit; larger numbers are harder to hit.
Activity 7 5-10min	Program wrap-up	1. Award candies for participating in all the challenges. Avoid singling out the top scores/results only. 2. Congratulate everyone on completing the 6-week Biathlon First Shots! Program and thank them for their enthusiastic participation. 3. Inform everyone that you may reach out about future biathlon opportunities. 4. Be present for any final questions that participants or parents may have.

Appendix A: EcoAim Range Diagram

Green Dots indicate backdrop- nobody should be behind the targets



Black Rectangles are targets and the distance between them is 2.75m to 3m apart (example from left leg to left leg of another target)

Grey Rectangles are the shooting mats and should be 8-10 m from the target and 0.5m apart

The range is to be marked out with V-boards or Pylons (red and blue lines)

Yellow figures indicate lights if hosting at night or low light conditions

Clear range signage on both sides

Appendix B: Teaching Tools

Figure 1: 50m Precision Shooting Scoring Target

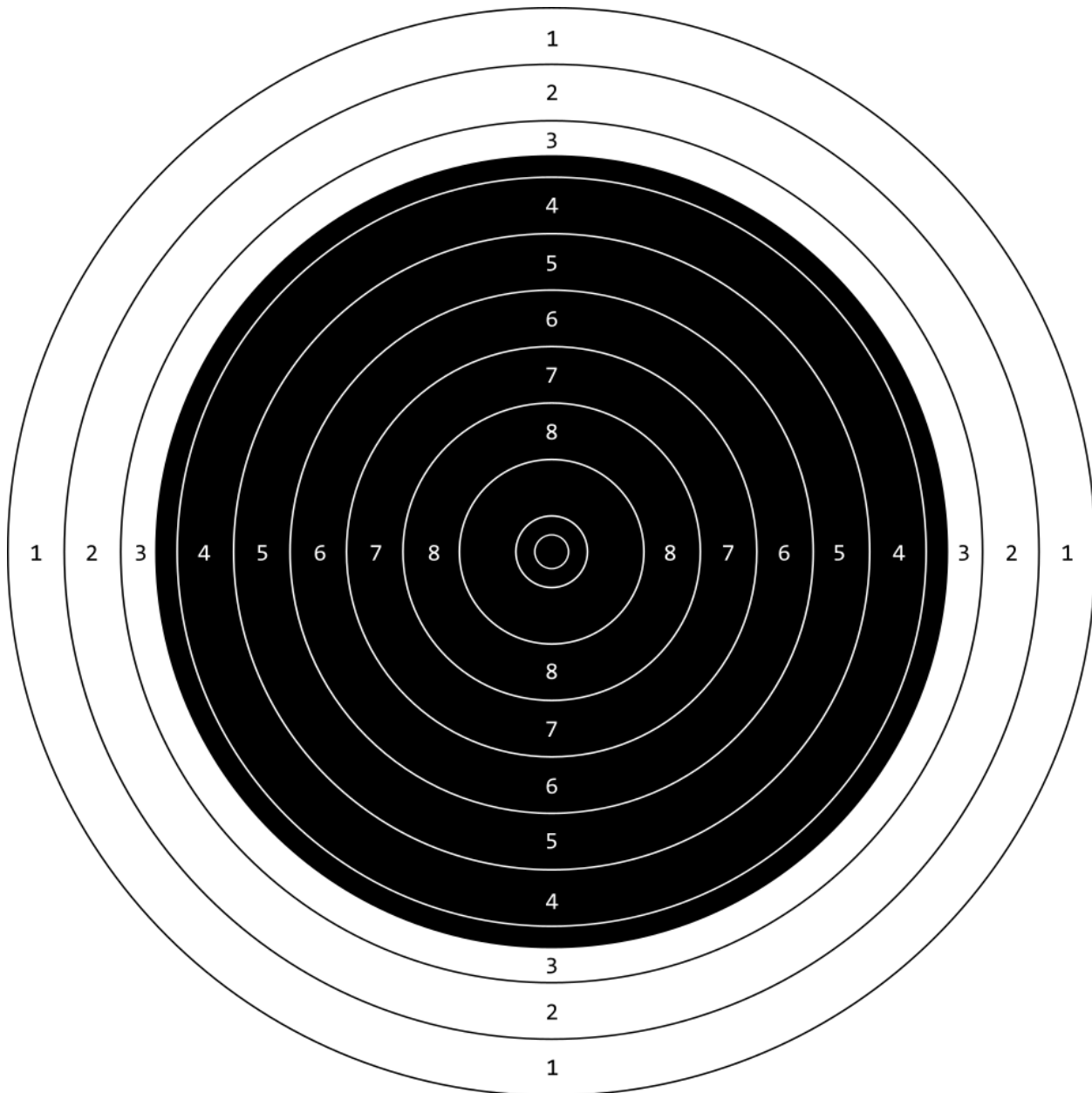


Figure 2: Correct Sight Alignment

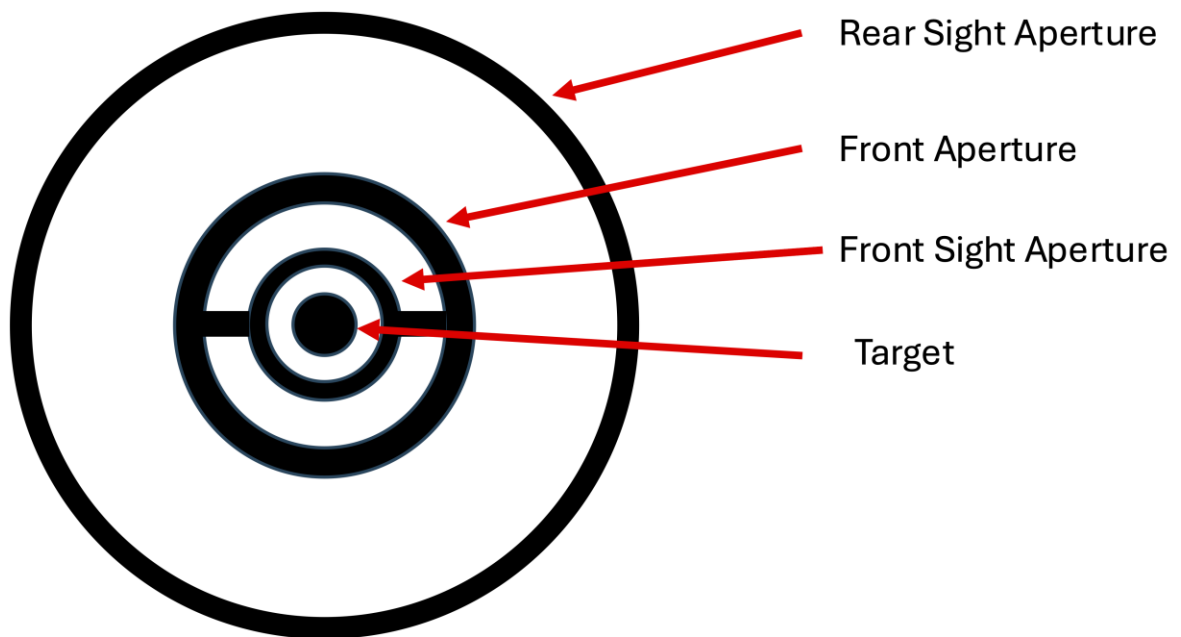
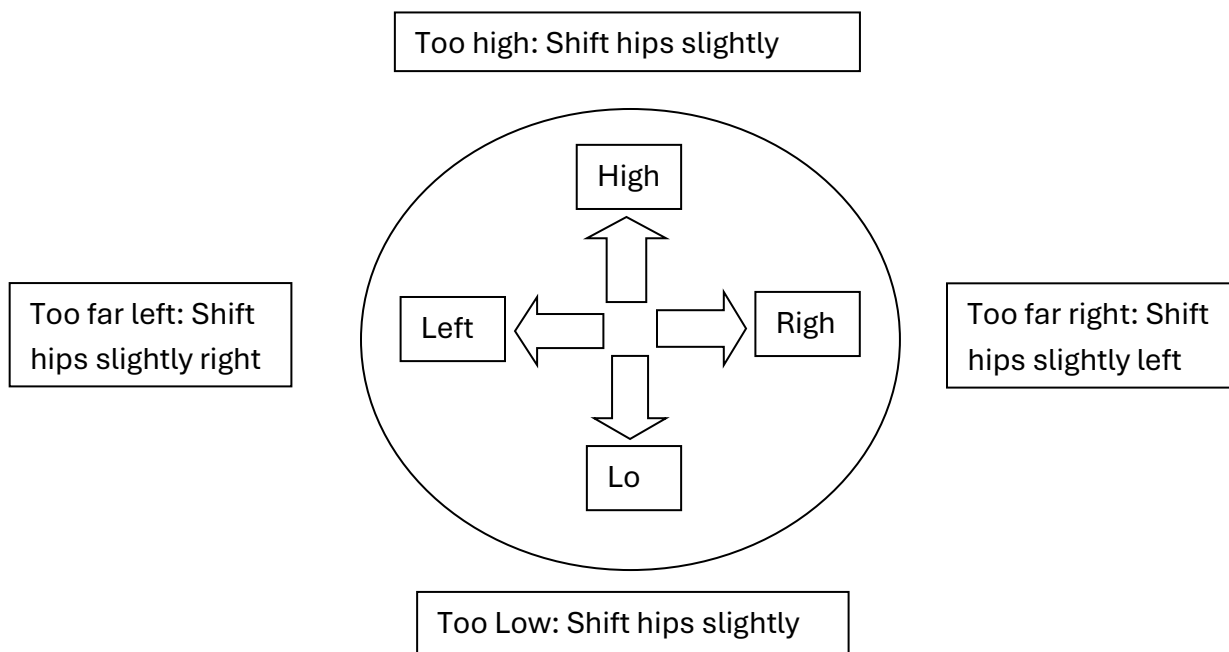


Figure 3: Natural Alignment Adjustments



Appendix C: EcoAim Signage

NOTICE

There is an interactive biathlon session in the area using optical biathlon rifles. While the equipment being used look like real rifles, they do not shoot projectiles. Instead, they use a camera to take a picture of the target.

Local law enforcement has been notified of the event.



SAFE PRACTICE

**Electronic Rifles in used. They
are non-projectile camera-
based.**



**To Watch please stand in
spectator designated areas.**

Appendix D: Games Bank

This section carries a series of games that can be adapted to your practice and support the development of the skills you are teaching. Don't be afraid to think up games of your own or adapt the level of the games to the skill level of your group.

Green Out!

- Purpose: To have fun while shooting biathlon targets and improve all aspects of shooting skill.
- Duration: 1-5min
- Precursor: 25% hit rate in practice
- Aiming Point: EcoAim Target
 - Under 11: Target size 3 or larger
 - Under 13: Target Size 6 or larger
- Number of shots: 5
- Instructions: Shoot five times and see how many targets you can change to green.
 - Black target: Target to be shot
 - Red target: Missed target
 - Green target: Target successfully hit.

Score the Most Points

- Purpose: To have fun while shooting biathlon targets and improve the number of shots fired in the middle of the target.
- Duration: 1-5min
- Precursor: 35% hit rate in practice
- Aiming Point: EcoAim Target
 - Under 11: Target size 3 or larger
 - Under 13: Target Size 6 or larger
- Number of shots: 5
- Instructions: Shoot five times at a target and try to get your shots as close to the middle as possible.
 - The absolute center of the target is worth 10+ points
 - The edge of the black is worth 3 points
- After 5 shots, the display will automatically calculate the total points from the five-shot sequence.

Simon Says

- Purpose: Practice the shooting technique in a fun way with the coach providing prompts.
- Duration: 5-10min
- Precursor: Previous instruction on shooting technique
- Aiming Point: EcoAim Target
 - Under 11: Target size 3 or larger
 - Under 13: Target Size 6 or larger
- Number of shots: 5
- Instructions:
 - The coach acts as “Simon” and provides directions starting with or without the prompt “Simon says”.
 - If the participant shoots without the prompt “Simon Says” they are out.
 - The winner is the participant with the most hits. Sample prompts include:
 - Simon says take position.
 - Simon says close the bolt.
 - Simon says aim at the target.
 - Simon says shoot the target and follow through.
 - Simon says put the EcoAim rifle back on the rest.
 - Simon says stand up fast.
- Tips:
 - Mix up the order of commands to keep the participants guessing what happens next.
 - Consider trading and letting participants play as Simon.
 - Keep each round short to encourage lots of shooting.

Shrinking Targets

- Purpose: Practice the shooting technique in a fun way and encourage hits close to the center of the target
- Duration: 1-5min
- Precursor: 80% hit rate in practice.
- Aiming Point: EcoAim Target
 - Set the Shooting Mode to “Progressive Shooting” in the EcoAim display settings.
 - Under 11: Target size 3
 - Under 13: Target Size 5
- Number of shots: 5.
- Instructions: The size of the hit area on the first shot is defined (U11 = 3, U13 = 5). With each subsequent shot, the size of the hit area will shrink by 1. Using U13 as an example:
 - First Shot: Target size 5
 - Second shot: Target size 6
 - Third shot: Target size 7
 - Fourth shot: Target size 8
 - Fifth shot: Target size 9

Hunter

- Purpose: Practice acquiring the target in a fun manner.
- Duration: 1-5min
- Precursor: 80% hit rate in practice.
- Aiming Point: EcoAim Target
 - Set the Shooting Mode to “Rapid Shooting” in the EcoAim display settings.
 - Under 11: Target size 3, Number of misses 5
 - Under 13: Target Size 5, Number of misses 5
- Number of shots: Unlimited, but the game is over once there have been 5 misses.
- Instructions:
 - Tell the participants that they will be shooting at the black target only.
 - When the game starts, all the targets will light up except for one target.
 - They should shoot at the single black target.
 - If they hit the black target, it will turn green. If they miss the target, it will turn red.
 - The EcoAim computer will then put up a new black target in random order (i.e. not in the usual shooting sequence).
 - The participant then must “hunt” for the next black target to shoot.
 - After each hit, the participant will have a little less time to find and hit the next black target. The game will gradually speed up. Any shot not fired in the allotted time is recoded as a miss, and the computer setups the next target to shoot.
 - The person who hits the most targets wins.

“X” min of biathlon adrenaline

- Purpose: Preparation for biathlon races
- Duration: minimum 10 min, maximum 24min
 - Because this involves racing around a ski course, the longer the game, the more tiring the game. Consider fitness and ski level abilities when planning the game such that the participants finish the game feeling positive about racing.
- Precursor: 60% hit rate in practice.
- Aiming Point: EcoAim Target
 - Set the Shooting Mode to “Penalty Time” in the EcoAim display settings.
 - Under 11: Target size 3, Penalty time 1 second, Number of shots 99
 - Under 13: Target Size 5, Penalty time 1 second, Number of shots 99
- Number of shots: Up to 99 shots in one shooting bout.
- Instructions:
 - Prepare a short ski course that is between 1-3 min in duration. It can be a simple loop or include obstacles and tight turns.
 - The start will be a mass start.
 - The participants will ski around a loop as many times as they can in the allotted time and must stop at the range to shoot on each lap.
 - While shooting, they must hit all five targets before they can go out and ski another loop.
 - They will have up to 99 attempts per bout to hit 5 targets.
 - If a target is missed, the targets will all turn red for one second, and the participant must wait until the target turns black again before attempting to hit it.
 - Once all five targets have been hit, the participant can go ski another loop
 - The goal is to hit as many targets as they can in the allotted time. The longer it takes a participant to “clean” a target, the fewer shooting bouts they can attempt and will have fewer chances to hit more targets.