

STUDENT AIR RIFLE PROGRAM

Basic Air Riflery Instructor Guide

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2018 Edition



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Acknowledgements

The Basic Air Riflery Instructor (BARI) guide is the official instructor guide for the Student Air Rifle Program (SAR), a program owned and operated by the Student Air Rifle Program, Inc. a 501(c)(3) nonprofit organization. We operate solely on the generosity of individuals, corporations and organizations concerned about the future of target shooting and youth.

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Basic Air Riflery Instructor (BARI)

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Basic Air Riflery Instructor (BARI) Guide Student Air Rifle Program (SAR)

SAR Overview	2
SAR Pilot Highlights	3
Introduction to the BARI Guide & Target Shooting	4
BARI Responsibility	6
BARI Coaching Techniques	. 11
Lesson 1 – Target Shooting Safety & Range Set-Up	. 15
Lesson 2 – Equipment Nomenclature & Inspection	. 22
Lesson 3 – Determining Eye Dominance	. 27
Lesson 4 – 11 Steps to Air Riflery Success	. 30
Lesson 5 – Taking the First Shot	. 36
Lesson 6 – Target Shooting Practice	. 45
Lesson 7 – Air Riflery Games	. 48
Lesson 8 – Equipment Maintenance & Repair	. 50
Lesson 9 – Air Riflery & Beyond	. 52
Appendix 1: BARI Training Agenda	. 56
Appendix 2: Sample Unit Overviews	. 57
Appendix 3: SAR Range Layout	. 58
Appendix 4: 11 Steps to Air Riflery Success, Primary Air Riflery Safety Rules, & SAR Whistle Commands	
Appendix 5: Umarex Embark Air Rifle & Journey .177 Pellet Nomenclature	. 60
Appendix 6: Sight Alignment & Sight Picture Tool	. 61
Appendix 7: SAR Parent/Guardian Letter (Sample)	. 62
Appendix 8: SAR Student Test (Sample)	. 63
Notes	. 64

Important: This guide must only be used in conjunction with successful completion of the Basic Air Riflery Instructor (BARI) training.

SAR Overview

If you are an active target shooter, odds are you first started with a BB gun or an air rifle. Used properly, air rifles are safe, universal, and fun, making them the go-to tool to introduce youth and adults to the sport of target shooting. The Student Air Rifle Program (SAR), developed by the Missouri Youth Sport Shooting Alliance (MYSSA[™]) in 2013, is a 501c3 nonprofit. SAR uses school aligned units of study, teacher training, universal whistle commands, positive language, and standardized equipment to facilitate an introduction to the lifetime sport of target shooting to school-aged youth in grades 4 through 12. Target shooting is known as a life time sport and can be practiced for most at an early age and continue through adult hood. In addition, target shooting has the ability to foster teamwork, responsibility and focus while teaching important life lessons.

Student Air Rifle Program Mission, Vision, Purpose & Guiding Principles

Mission: The Student Air Rifle Program facilitates an introduction to the lifetime sport of target shooting to school-aged youth in grades 4 through 12.

Vision: Everyone will have the opportunity to participate in the shooting sports and target shooting will be universally regarded as a safe, relevant and educational activity.

Purpose: Increase involvement in the shooting sports, enhance educational performance, and promote positive youth development through firearms safety and target shooting education.

Guiding Principles:

- **1.** Safety will be practiced and promoted ensuring target shooting remains a safe activity.
- **2.** Primary curriculum focus will be basic air rifle target shooting methods.
- **3.** Standardized training and equipment will be used to deliver a safe, structured, educational and fun curriculum.
- **4.** SAR will be taught in-school using curriculum aligned with national physical education standards and delivered by certified school teachers in grades 4 through 12.
- **5.** SAR will be coordinated through fish and wildlife agencies and nonprofit organizations around the country.
- **6.** Regional, State, and National tournaments will be promoted and encouraged to foster student development, educational performance, and teamwork.

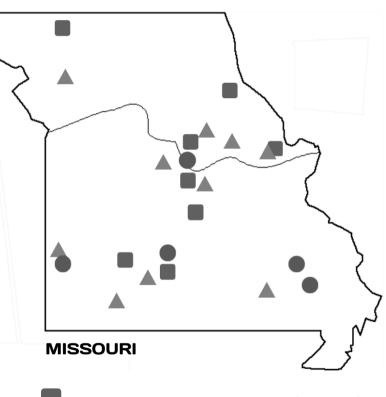
SAR Pilot Highlights

In 2013, after several years of discussion, feasibility, and planning, the Missouri Youth Sport Shooting Alliance (MYSSA[™]) began development of the Student Air Rifle Program (SAR).

As with any significant effort, a pilot was planned to determine feasibility and allow for facilitation of positive and appropriate change in the program for sustainability.

Below are highlights of the pilot.

- Over 3,000 students participated in the pilot; over 2,400 students filled out evaluations.
- 95% of schools who participated in the pilot implemented the curriculum when it became officially available.
- Prior to SAR, 16% of students had never shot a BB gun or air rifle.
- After SAR, 68% of students would be highly likely or likely to target shoot again.
- 21% of participating students had not previously shot a firearm.
- 95% of instructors noted an increase in student attentiveness, over 50% of instructors reported a decrease in behavioral problems, and 97% of instructors noted an increase in student confidence during SAR.
- Confidence in target shooting increased for 48% of students.
- 72% of participating students strongly liked or liked SAR.
- 100% of instructors agreed the BARI training prepared them to teach SAR.



- Spring 2015 & 2016 Pilot (School)
- Spring 2016 Pilot (School)
 - Spring/Summer 2016 Pilot (Organization)

Introduction to the BARI Guide & Target Shooting

According to the National Shooting Sports Foundation (NSSF), more than 19 million Americans safely participate in target shooting. The sport of target shooting has grown tremendously over the years, with the roots of shooting competitively with firearms beginning in the late 19th century. Most start target shooting with a BB gun or an air rifle and many are introduced to shooting sports by a mentor. Today, there are number of shooting sports activities that are practiced in the Olympics. Air rifle and smallbore target shooting is a sanctioned activity with the National Collegiate Athletic Association (NCAA). Target shooting serves as a lifetime sport and is an activity that many different abilities, ages and backgrounds can participate in and experience success.

In addition to being popular and fun, the shooting sports are also safe. Data compiled by the National Safety Council indicates shooting sports are safer than basketball, football, soccer, golf and others.

It is the purpose of the Student Air Rifle Program (SAR) Basic Air Riflery Instructor (BARI) training and guide to provide a safe introduction to the lifelong sport of target shooting. This is accomplished and facilitated by trained individuals.



Throughout this instructor guide, you will find specific **Lesson Objectives** followed by a general **Discussion** of what the student is expected to learn during the lesson. Also provided will be a list of **Materials Needed**. A detailed description of **Conducting the Lesson** is presented along with multiple **Figures** and **Teaching Suggestions** to aid the instructor. At the end of each lesson, some of the more important concepts are reviewed as **Checks for Understanding**.

The authors of this training program support the concept that positive reinforcement and feedback are the keys to learning and retention. By accentuating what the student should do rather than focusing on bad habits or mistakes, the student more clearly understands objectives, will learn to think positively, and keep his/her mind clear of negative distractions.

The lessons are presented in a sequence that promotes safety and the learning of target shooting basics. Before shooting a rifle, the student first understands how to maintain target shooting safety and becomes familiar with the air rifle by reviewing the parts. Then the student will be taught the basics of shooting while using the "11 Steps to Air Riflery Success." Finally, the student is guided through a demonstration of how to properly shoot an air rifle. During initial shooting sessions, the student is encouraged to focus more on performing a proper and safe shot than hitting the bullseye. The student who understands what effective form looks and feels like and then reflects after every shot is much more likely to maximize his/her potential, helping him/her "aim for success" on the target range and in life.

BARI Responsibility

BARI Code of Conduct and Values

The Basic Air Riflery Instructor (BARI) guide is intended to provide a comprehensive guide to educate and train instructors to present the Student Air Rifle Program (SAR). All Basic Air Riflery Instructors are expected to conduct themselves in a professional manner providing solid representation for SAR, the organization in your state coordinating SAR (often the state fish and wildlife agency), as well as the organization



the BARI works for (often a school).

Regardless of the nature of our business, it must be conducted with the utmost of integrity and with superior customer service. Basic Air Riflery Instructors are expected to treat coinstructors, coworkers, parents, students, public and

all others with respect, courtesy, and dignity. Each BARI has the responsibility to ensure contacts, with whomever, are a positive experience.

Along with respect for people, Basic Air Riflery Instructors bear the responsibility of presenting a positive image. Positive image includes not only what we wear, but also how we wear it. We are expected to present the best image possible. An effective, positive image can be obtained by adhering to the following BARI values (shared courtesy of MidwayUSA).

- Honesty
- Integrity
- Humility
- Respect for others
- Teamwork

- Positive attitude
- Accountability
- Stewardship
- Loyalty

BARI Preparation and SAR Implementation Steps

Before implementing SAR, there are a number of steps to ensure the program is implemented in an efficient and sustainable manner. The steps below provide a general overview of the process.

- **1.** Contact your state SAR coordinator, if there isn't one, contact SAR directly to discuss options.
- 2. Gain permission from your school or organization (this includes permission using
- whatever process is used for decision making with your school/organization such as the principal, superintendent, or school board).
- **3.** Tentatively determine where at your school/location the unit will be conducted to ensure SAR safety standards are met (see Lesson 1 for range set-up and layout).
- **4.** Sign up for a BARI course and complete the training requirements (8 hour course, passing of a 100 question exam with an 80% or better, completion of an MOU, etc.). BARI courses can be found by visiting the SAR website.
- **5.** Order Equipment from SAR (on page 8).
- **6.** Prepare and test all equipment before using with students.



- **7.** Send home active opt-out letters to parents/guardians (a sample is included in the Appendix).
- **8.** Prepare for the unit by reviewing the BARI guide and materials.
- 9. Complete lessons 1-4. After lessons 1 4 have been completed, it is strongly recommended all students take a student test before they are allowed to shoot. See Appendix for sample test questions. The BARI can establish other tests (with additional questions) to fit the grade level.
- **10.**Complete the remainder of the unit (lessons 5-9) (all curriculum must be covered the way the BARI is trained and how the material is presented in the BARI guide (see the Appendix for a unit overview).
- **11.** Provide reports and any information that may help improve SAR.

Instructor/Student Complexity

To ensure safe and efficient facilitation of the shooting lessons, there should be a maximum of 10 students on the shooting line for every 1 Basic Air Riflery Instructor.

SAR Equipment Kit and Ordering

The following items make up a standard SAR equipment kit. The standard kit provides enough consumable items (pellets, reactive targets) for 100 students. **Use of the official SAR equipment is required** and is covered in the BARI guide and BARI training.

- a. (10) Embark Air Rifles
- **b.** (1) Storage Trunk
- c. (2) Collapsible Rifle Racks
- **d.** (1) Rifle Maintenance/Cleaning Kit
- e. (2) Lockable Rifle Storage Containers
- **F.** (6) Tins Journey .177 caliber
 Lead Free Air Rifle Pellets
 (3,000 total pellets)
- **g.** (1) Lockable Pellet Storage Container
- h. (30) Pairs of Universal Fit Safety Glasses and (10) pairs of Small Frame Safety Glasses
- i. (1) Safety Glasses Cleaning Kit
- j. (1) 10' x 30' SAR Ballistic Pellet Net
- k. (5) Target Holders
- I. (300) Shoot-N-C Targets
- **m.** (1) 11 Steps and Safety Rules Banner



Note: Pellet holders are not included in the kit and instructors are expected to make their own pellet holders. Many instructors use bowls attached to the top of floor archery quivers.

To order SAR equipment, visit <u>www.studentairrifleprogram.org</u> and download an order form along with the instructions. If you have issues with equipment, contact SAR.

Working with the Media and Communicating about SAR and Target Shooting

During your time as a BARI, it is likely you will be approached by the media or have other opportunities to communicate about SAR and target shooting in general. The following information is provided to ensure you have appropriate content to engage in positive communication about SAR and target shooting.

SAR Key Messages

Key messages help present clear, consistent, and concise information. Here are five key messages for SAR and target shooting in general.

- **1.** SAR facilitates a safe and fun introduction to target shooting.
- 2. Target shooting is a collegiate and Olympic sport.
- **3.** Target shooting is a safe activity; safer than most ball sports.
- **4.** Target shooting is a lifetime sport that can be practiced by all.
- 5. Target shooting teaches focus, self-discipline, and teamwork.

Social Media and Photos

Social media is an active part of our culture. SAR participates in social media and encourages Basic Air Riflery Instructors to post appropriate photos on social media of students participating in SAR. Here are guidelines to keep in mind.

- Whatever process for permission your school requires (from the student to take their photo) must be used before photos are taken or posted on social media. Often, "identifiable" photos of students with faces visible are not allowed without permission.
- **2.** Ensure all photos depict a safe environment. Rifle muzzles must always be pointed in a safe direction both from a reality standpoint and from a perception standpoint. If shooting is occurring or being depicted in the photo, all students must have safety glasses on and be holding/shooting the air rifle properly.
- **3.** If shooting is not occurring, muzzles must still be in a safe direction. In addition, it is preferred for actions to be open and safeties to be on. Students should use the two-handed ready carry when carrying.
- **4.** Ensure all photos include only approved SAR equipment being used properly.
- **5.** Ensure all photos portray a positive image (appropriate dress free of derogatory items, students who are having fun, etc).

Using the criteria above, Basic Air Riflery Instructors are encouraged to take pictures and post them on Facebook or Instagram using #studentairrifleprogram, #sar, #embarkairrifle or #embarkonasarjourney. Official accounts can be located by searching @studentairrifleprogram. We will often repost or retag uploaded photos from the official SAR accounts.

@studentairrifleprogram



Adaptations for Participants with Special Needs

In compliance with the American Disabilities Act, this program will make all reasonable efforts to accommodate people with special needs. Contact SAR directly for information on adaptations.

Running SAR Competitions and Tournaments

Refer to Air Riflery and Beyond (Lesson 9) and additional SAR tournament guide for more information.

Instructor Training and Retention Requirements

Training Requirements for Basic Air Riflery Instructor (BARI) Candidates

- **a.** Candidate must be at least 18 years old.
- **b.** Candidate must be trained by a Basic Air Riflery Instructor Trainer (BARIT) or Basic Air Riflery Instructor Trainer Specialist (BARITS) level instructor.
- **c.** BARI course length is 8.5 hours (allows for all training content, a 30 minute lunch, two 10 minute breaks, and test completion).
- **d.** Candidate must pass the BARI practical and score at least 80% on the exam.
- e. BARI course cost includes training materials (\$50) and a course fee (if applicable).
- **F.** Graduates must complete and submit a "Graduate Information Form" (online available).

Retention Requirements for BARI

Activity: Teach SAR air rifle target shooting at least every two years, complete a BARIT course, or retake the BARI course.

Content: Only SAR approved equipment; rifles, pellets, target holders, and pellet curtain may be used when presenting SAR instruction.

Reporting: Annually submit an on-line teaching activity report to: <u>https://sarinstructor.org</u>.

Important: SAR specific note: To assure effective program coordination and consistency in SAR, instructors who want to present air rifle target shooting lessons to teachers or students for SAR, must first get the approval of state, provincial, or country in question's SAR coordinator. This state SAR coordinator will make sure state-specific requirements are met.

BARI Coaching Techniques

It is a rare student who will be able to immediately transfer what he/she sees and hears about proper shooting form to perfect technique on the range. The instructor needs to be able to recognize movements the student can do better. The instructor should help the student make adjustments necessary to improve performance of the "11 Steps to Air Riflery Success".

In some instances, the learning process may be accelerated if the instructor guides the student by demonstrating or modeling proper technique. **Physically touching the student is unnecessary and ill-advised, even with the student's permission.** The instructor must realize it is necessary to move about the student to determine if the student is performing proper shooting technique. When the student's technique needs to be improved, direction should be provided in a motivational manner.

Most new target shooters want to participate, especially when it comes to shooting. Occasionally, a student may disobey range rules or instructions. If this occurs, it can disrupt the class or create safety concerns. This type of behavior needs to be recognized and remedied as quickly and as positively as possible.

Coaching Positions

Here are four coaching positions the BARI should use. (Note: Following range safety protocol, the instructor should always keep both feet behind the shooting line when coaching if shooting is taking place).



Coaching Position "Face to Face": .5-1 yard or meter from the student on the shooting line, looking at the front of the shooter's torso. From here the instructor can see the full shooting position (standing in this case), how the rifle hand is holding the rifle, how the trigger hand is positioned, and if the students face is positioned properly for sight alignment.

Coaching Position "Behind Elbow": .5-1 yard or meter behind the students elbow. At this location the instructor can also observe the correct characteristics of the standing position and proper follow-through after the shot.

Coaching Position "Student's Back": .5-1 yard or meter behind the student on the shooting line looking at the student's back. From here, the

instructor can verify proper position and form as well as proper eye protection and follow through.

Coaching Position "Well Behind the Student": 4 yards or meters behind the students elbow. This is a great position to observe adherence to the 11 steps, particularly to follow-through and to make sure the student is shooting at the correct target.

Positive Reinforcement & Feedback - CPR:

During the process of learning a skill, it is likely students will need correction at some point. For a high degree of skill retention, the process of providing feedback and corrective advice is important. How you provide the feedback and corrective advice is even more important. In the National Archery in the Schools Program (NASP®), and in the Student Air Rifle Program (SAR), we use a three step process to correct a student's performance of the "11 steps to Air Riflery Success" or other topics being covered. To help remember the 3 steps, an acronym, CPR is used. The "C" stands for compliment, the "P" for positive correction, and the "R" for review.

Instructors should explain to students the instructor may observe something in the student's form that needs to be improved. The instructor will use positive oral communication or modeling and demonstration techniques to convey the needed improvement. It is unnecessary and ill-advised for the instructor to physically touch the student. To be most effective, whenever the instructor observes something the student should do differently, it is important that the instructor's suggestion be communicated constructively to the student. It is more helpful to reinforce what you want the student to do rather than emphasize what they are doing incorrectly. Here are the details.

Compliment:

Before corrective advice is provided, the instructor should first compliment the student on some aspect of his/her technique. For example, the instructor might compliment the student on how they were holding the rifle correctly and had a solid foundation. It is important that the compliment be descriptive. For instance, if the student's rifle hold was "good", what was "good" about it? It was "good" because, for example, the students' cheek was correctly positioned on the stock of the rifle and the forearm was securely positioned.

Positive Correction:

The instructor can reinforce the desired action by providing positive corrective advice describing the desired action the student should work on. For instance, if the rifle hold needs improvement, the instructor might say, "I like how you kept the muzzle pointed in a safe direction the entire time, next time you shoot, make sure you position your rifle hand firmly on the forearm." It is counter-productive for the instructor to describe, or

demonstrate what the student did incorrectly. Drawing attention to incorrect technique reinforces the wrong thing.

Review:

Finally, the instructor should observe or review the student's next shot sequence to provide feedback about whether or not the improvement was achieved. If the instructor merely leaves the student after providing positive correction, the student may get the impression the instructor cares too little about the student to stay and make sure the correction was achieved. When actually shooting, if the student is unable to perform the correction after the next few shots have them practice in a safe area while you help them with CPR until they are successful.

Managing Disruptive Students:

During the skill development and learning process, instructors will also encounter students displaying disruptive behavior that may impact the ability of the entire class to learn. In addition, this behavior may lead to unsafe actions. It is important that students follow range rules and signals to maintain a safe and constructive learning environment. If a student fails to follow a rule, such as stepping over a line before the proper whistle signal is given, this must be addressed. It is worth remembering that most students want to participate in target shooting. Some students with a reputation for being disruptive in other venues will gladly behave in target shooting class. Because they want to shoot, target shooting can be

"Some students with a reputation for being disruptive in other venues will gladly behave in target shooting class. Because they want to shoot, target shooting can be used as an opportunity to motivate students to follow rules."

used as an opportunity to motivate students to follow rules.

Here are four steps the BARI can take to address disruptive behavior using the example of a student with toes over the waiting line before the "get rifle" whistle command is given.

1st: Repeat the Rule: The instructor should remind the class by repeating the "toes behind the waiting line rule." Sometimes the anticipation of shooting is so great that some students forget to follow the rule or maybe they misunderstood the rule.

2nd: Peer Pressure: If the student persists in being over the waiting line, the instructor should apply peer pressure. When everyone's' toes are behind the waiting line like this, (instructor steps behind the waiting line to demonstrate) I will blow the whistle twice so you may get your rifles.

3rd: Teamwork: If the student still disobeys the rule, the instructor could quietly ask for this student's help by asking him or her to signal the instructor when everyone's toes, including his/her own, are behind the waiting line. Be clear the student will not

enforce this rule, but merely signal the instructor when everyone (including this student) is following the rule. To help motivate the student, allow the student to determine an appropriate signal (touch chin, ear, nose, etc.). The instructor must approve of the signal the student offers to give.

4th: Remove Shooting Privileges: If these methods fail to achieve compliance, begin removing shooting privileges from the offending student until the rule is followed. Reduce the number of pellets or number of sessions in which a student is allowed to shoot. Whatever the penalty or reduction in shooting privileges, it must be enforced. If the student follows the rule the next time, then shooting privileges can be restored.

Coaching Retention:

- **a.** Why is it useful for the rifle instructor to observe the student from different positions?
- **b.** Instead of touching, how should the instructor let the student know how to improve his/her form?
- **c.** Why is it more helpful to be informed what to do rather than what not to do?
- d. Why is it important that every student follow all safety procedures?

Helpful Hints for Coaching:

- Reinforcement of 11 Steps Chronological Order: While identifying needed improvements, always work with the 11 steps and work from step one forward. For example, if several corrections are needed, concentrate on one improvement at a time and reinforce positive compliments regarding steps earlier than the step that needs to be improved. Only give one or two corrections at a time. Stay with the student until all 11 steps are being conducted properly.
- Video Camera to Show Form: If time and equipment availability permits, the instructor could set up a video camera to document the student's form. Sometimes it helps the students to see for themselves what they could do better.
- Modeling Positive Reinforcement & Feedback: It might be useful to have a volunteer or an assistant help model this technique. The model should be whistled to "get rifle" and whistled to "shoot", before demonstrating.
- Students Correct the Instructor: To help the students understand this
 procedure, the instructor could shoot a pellet. During the shot, the instructor would
 do one thing that should obviously be improved such as holding the rifle stock off of
 the cheek. Safety should not be compromised in any way during this demonstration.
 The class would be asked to provide the proper correction. The instructor should
 insist on hearing a meaningful compliment first, then a positively stated improvement
 instruction, and review the next shot to assure improvement was achieved.

Lesson 1 - Target Shooting Safety & Range Set-Up

Materials Needed:

- Signs to mark closed doors and other entry-ways "Caution: Target Shooting Inside, Stay Out" (optional: caution tape)
- One 30 ft. by 10 ft. SAR backstop net for every 5 target holders
- Ladder, rope and zip ties for hanging backstop net
- One target holder for every 2 students
- Supplies to place target, shooting, and waiting lines on the floor or ground
- 100 ft tape measure
- One Umarex Embark air rifle for demonstration (controlled by instructor)
- Journey .177 pellets for demonstration (controlled by instructor)
- Air rifle maintenance kit
- Eye protection for every student and anyone forward of the spectator line
- Rifle racks with enough rack space to rack air rifles when not shooting
- One "11 Steps to Air Riflery Success and Primary Air Riflery Safety Rules" banner
- Whistle and BARI guide for instructor

Lesson Objectives:

Students will learn the primary rules of air riflery safety and how to safely set up and use an air rifle target shooting range.

Classroom Application:

This is the first lesson to teach to students before target shooting takes place.

Discussion:

According to the National Shooting Sports Foundation (NSSF), target shooting is one of the safest participant sports to be involved in. There are thousands of shooting ranges across the country for target shooters to hone their skills. These ranges are highly structured and are set-up in a way to facilitate safe shooting.

During this lesson on target shooting safety and range set-up, the BARI will learn how to ensure target shooting occurs in a safe direction. For the first time, students will be exposed to the primary safety rules of target shooting with a rifle. The range layout and design will be explained to students so they understand how the range is set-up and the reasoning. BARI candidates will be taught to use simple whistle commands to facilitate the shooting process and how to structure target shooting lessons with their students. It is important the range be set up with adherence to the guidelines described in this lesson. All range and air riflery safety rules must be strictly followed to ensure the safety of every member in the class. Doing so will

preserve the shooting sport's reputation as a safe and enjoyable activity.

Classroom Set-Up:

A safe target shooting range will be in place when the students arrive to class. Whether you conduct this lesson inside or outside, make sure the lesson begins with students away from the range, but in a safe area where the range is highly visible. In addition, the

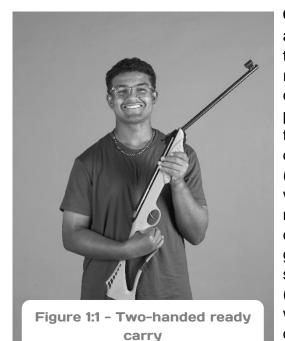
instructor should have a whistle ready for instruction and should have an "11 steps to Air Riflery Success and Primary Air Riflery Safety Rules" banner visible. During the session, bring the students behind the waiting line so they can see the full set-up of the range and the importance of range safety.

Conducting the Lesson:

Sample Introduction: "I want to welcome all of you. We are going to be participating in beginner air rifle target shooting. Target shooting is one of the safest activities you can participate in, but to keep it safe we have a few rules. Our first lesson is called Target Shooting Safety and Range Set-Up. The purpose of the lesson is to teach each class member how a safe and effective air rifle range should be arranged and how to safely participate in target shooting."

The Primary Rules of Air Riflery Safety: "When we begin rifle target shooting later, we will be following these primary simple rules to ensure everyone remains safe." Briefly explain each rule while using an Embark air rifle as an example (one air rifle should be positioned with the action open and the muzzle up in a rifle rack between the waiting line and the shooting line).

- **1.** "Always keep the muzzle pointed in a safe direction. (point to the muzzle and define safe direction for the range location)
- **2.** Always keep your finger outside the trigger guard until ready to shoot. (point to the trigger and trigger guard)
- **3.** Always positively identify your target; check both in front and behind for safety.
- 4. Always keep your safety on until ready to shoot." (point to the safety)



Carrying Air Rifles on the Range: "There are a number of safe ways to carry an air rifle. For this class, we will only be using the two-handed ready carry which is the safest carry to use. This carry looks like this." (demonstrate the carry by placing the rifle hand on the forearm and the trigger hand on the grip of the air rifle (all fingers on the trigger hand, including the trigger finger (index) should be gripped around the pistol grip) with the fingers outside of the trigger guard while maintaining a safe muzzle direction). If more comfortable, you can move your trigger hand and grip it completely around the comb of the rear stock in the thumbhole like this as another option (demonstrate). In addition, you will notice, except when shooting, the air rifle chamber is always open, free of a pellet, and visible. We will cover this in more detail later."

Eye Protection Requirement while shooting: "While shooting air rifles, everyone will be required to wear eye protection." Show examples of approved eye protection and demonstrate their use. Approved eye protection will be marked "Z87" on

the side of safety glasses. If students are wearing prescription glasses, an additional pair of safety glasses is not required. Most students will prefer clear glasses, however, tented glasses may be used as well. Eye protection must be worn by everyone that is forward of the spectators line; the spectators line will be reviewed shortly." Note: safety glasses should be cleaned by



students or instructors as needed but as a minimum between class periods.

Hearing Protection Discussion: "If you will be shooting air rifles at school or at another range for more than two hours you will need to wear hearing protection. In addition, hearing protection should be worn for firearms that traditionally produce louder sounds than air rifles." The Embark air rifles produce an at ear db reading of 91. Based on information under Noise and Hearing Loss Prevention from the National Institute for Occupational Safety and Health (NIOSH), students can be exposed to shooting the



Embarks for a maximum of 2 hours. Over two hours of exposure at 91 db could cause hearing damage. If students will be shooting for more than two hours, instructors must provide hearing protection. Formable (foam ear plugs) hearing protection is recommended with a Noise Reduction Rating (NRR) of at least 20 db.

Target Shooting Hygiene:

"Similar to other sports, eating

food while shooting is disallowed. After shooting, make sure you wash your hands with cold soapy water before eating or drinking. We will be using lead free pellets during our shooting sessions. However, it is customary for lead to be used in many shooting activities; make sure you understand and use the simple steps to protect yourself while shooting. In addition, as in archery, students wearing jewelry or with long hair that may

become tangled during the shooting process should remove the jewelry and/or put hair up in a ponytail."

Ricochet Discussion: "Shots should only be taken at the targets on the target holders that are lined up with students on their assigned lane. Shots at the floor or other targets is disallowed and could potentially harm you, other students, or damage equipment." Instructors should closely monitor target backstop material as pellets begin to collect and build up which could cause ricochets. Target backstops should be changed if they become too damaged.

Explain Emergency Whistle Signal: "To facilitate target shooting, I will be using a whistle. 5 or more whistle blasts (demonstrate by blowing 5 - 10 whistle blasts) means an emergency has occurred on the range. For example, someone has walked on the

range or is about to. When an emergency is signaled, students must stop what they are doing and assume the **rifle ready position** (immediately point the muzzle of your rifle straight up, keep your finger off of the trigger, break the barrel open, make sure the safety is engaged, and hold the rifle with the two-handed ready carry against your upper body). The instructor will explain further



directions after blowing the emergency whistle command. Safety is everyone's

responsibility; if anyone sees something happening that is unsafe, you may also yell "Cease Fire" which has the same meaning as 5 or more whistle blasts. Later, when we begin shooting, we will use other whistle commands to run the range."

Instructions for instructor to handle emergency whistle signal or cease fire:

- **a.** The emergency whistle should be blown or a cease fire called any time there is a real or potential for a safety concern.
- **b.** After blowing the emergency whistle signal or yelling cease fire, make sure all students are in the rifle ready position.
- **c.** If the emergency is resolved, explain to students that everything is clear and they can resume shooting after they hear one whistle blast (shoot) from you.
- **d.** If the emergency is not resolved, verbally ask students to lay the rifles on the floor with the muzzles pointed in a safe direction and return behind the waiting line. If appropriate, instructors can then discharge air rifles into a safe backstop and return rifles to the rack with the safety on and the barrel slightly broke open.

Analyzing the Location: "Before setting up or building the range, a safe shooting direction must be determined by analyzing the proposed range location. The location must be large enough for a SAR air rifle range which would be at least 30 feet (10M)



wide and 65 feet (20M) deep. There must be a direction students can shoot toward that will remain free of pedestrian traffic during the entire shooting session. If doors are in the direction shooting is to occur, they must be locked and signed to prevent entry (Caution: Target Shooting Inside, Stay Out). The area near and behind the targets should be free of expensive equipment such as floor-mounted electronic score boards or walls with large windows."

"If shooting outdoors, the range should be located in an open area where all who might approach can see that target shooting is taking place. In such an open setting, the teacher/instructor (range operator) will have ample time to signal the emergency whistle signal or call a cease fire if someone is coming towards the target area."

Net Backstop:

Indoors: "The 30 feet long and 8 -10 feet high SAR net backstop is pellet-resistant, but not pellet-proof. The SAR net forms the range backstop. The net should be hung at

least 30 inches from the wall, columns or other hard objects. About 3 to 6 inches (8-15 centimeters) of the backstop bottom is draped onto the floor. The net should be loosely draped with folds and wrinkles along its length. A taut backstop is less likely to stop a pellet than a loosely hung net backstop. The backstop is attached to sturdy structures that will remain upright under the weight of the net."

Outdoors: "If feasible, a net backstop should be used to catch stray pellets outdoors as well. If a net backstop is not feasible, a dirt or other adequate backstop must be used or there should be enough open distance beyond the targets to prevent errant pellets from endangering a bystander, structure or equipment."

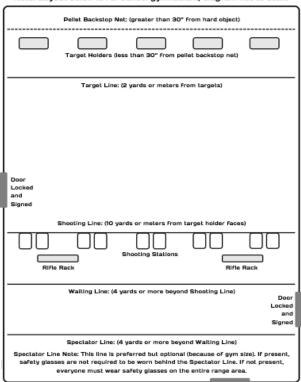


Figure 1:6 - Indoor range

Note: Layout below is For school gymnasium; diagram not to scale

Target Placement: "Target holders should be evenly spaced as close (maximum of 30 inches) to the net backstop as possible without pinning down the bottom of the backstop and making it tight (should be loosely draped). Positioning the target holders a maximum of 30 inches from the backstop prevents a high pellet from glancing off the top of the target and over the backstop." It is acceptable for one or two students to shoot at the same target holder (which holds two paper targets). One target holder should be placed per pair of students.

Range Lines:

Indoors: "Using easily removable "painters tape" a target line is taped to the floor about 2 yards or meters up range from the targets." This line will allow students to safely view their targets.



"The initial shooting line should be 10 yards or meters up range from the targets. **Shooting should not occur closer than 10 yards or meters.** A waiting line should be placed 4 yards or meters up range from the shooting line. A spectator line should be placed 4 yards or meters up range from the waiting line. The spectator line establishes a line on the range for the use of eye protection

(forward of the line eye protection is required). As the entire class progresses, more distant shooting, waiting, and spectator lines may be used." As the skill of the students improve, shooting lines can be moved to challenge the students. Look at Appendix 3 for the SAR range layout. Note: If there isn't enough room on the range for a spectator line that is acceptable. However, if that is the case, everyone on the range area must wear safety glasses while shooting is occurring.

Outdoors: "Since painters tape fails to stick on asphalt, the ground or grass, the best way to put down lines in many outdoor situations is to use a chalk line machine or surveyor's paint. Another way to mark these lines would be to lay down a section of rope. The rope should be laid down loose rather than tied or staked down, to prevent it from becoming a tripping hazard."

Equipment Placement, Storage and Preparation: "Pellets (the ammunition used in the air rifles) are kept and controlled by the instructor and given to students individually only after instruction. The pellets we will be using will be reviewed in detail later. Rifles are stored inside locked hard cases when not in use. In addition, the locked rifle cases are stored in a room where access is minimal." It is important the instructor

and school administrator are the only individuals with access to the rifle cases and pellets. Instructors should also consider keeping an inventory log in a locked place indicating the serial numbers of air rifles kept at the school (the serial number is located near the rear sight, on the left side of the Embarks). "During shooting sessions, air rifles are removed from the case with the muzzle pointed in a safe direction. Once removed from cases, barrels are slightly broken open and checked for obstructions by looking through the breech end. Embarks are placed in rifle racks that should be positioned between the waiting line and the shooting line." Rifle racks should be positioned where students and instructors cannot access the rifles while standing at the waiting or shooting line.

Possession: "Under no circumstances are students allowed to bring

their own air rifle or pellets to school." Instructors should refer to school policy regarding this activity. In addition, instructors/teachers should refer to school policy about notifying parents of students regarding school-sanctioned activities such as target shooting. See appendix 8 for a sample parent/guardian active opt-out letter.

Checks for understanding:

- a. What is the number one rule of air riflery safety?
- **b.** Why is it important that doors be locked and signed between the shooting line and behind the net backstop?
- **c.** How far from the target holder faces should the shooting line be during initial instruction?
- **d.** If you have a loaded air rifle and you see someone walk in a door behind the net backstop, what should you do?

Lesson 1 Teaching Suggestions:

- **Outdoor Range Set-up:** It is important an outdoor range be in an open area rather than tucked in between buildings or other hidden locations.
- Secure Net Supports: Portable volleyball poles are usually unable to support the weight of the pellet backstop net. To prevent the poles from falling and possibly causing injury, they are disallowed. Instead, use solid structures. An example would be installing eye-bolts into walls and stretching a cable to hold the net.

Lesson 2 - Equipment Nomenclature & Inspection

Materials Needed:

- One Umarex Embark air rifle
- One container of Journey .177 caliber pellets
- (Optional) Embark Air Rifle
 Operations Manuals (one for each pair of students)

Lesson Objectives:

Students will learn the basic parts of the Umarex Embark .177 caliber air rifle and the Journey .177 pellet. In addition, instructors will learn how to identify properly working equipment.

Classroom Application:

This lesson is conducted before shooting begins so

students have an understanding of the parts of the rifle and pellet contributing to a safe experience. Maintenance of the equipment will be discussed in a later lesson.

Discussion:

In order to communicate the introductory target shooting process to students, it is important students become familiar with the parts of the air rifle and pellet they will be shooting. Students may hear "always point the muzzle in a safe direction" but may not follow the rule if they are unaware what the muzzle is or where it is located on the air rifle.

In addition, learning the parts of appropriate equipment helps students retain the information. It is equally important to be able to recognize the characteristics of a properly functioning air rifle that is ready for use. Before shooting begins, an inspection of the equipment should take place to ensure equipment is ready for use.

Classroom Set-Up:

Target shooting will not take place in this lesson. It may be helpful, however, to have a waiting line set up in advance for students to stand behind while covering the parts of the rifle and pellet. Additionally, a classroom setting with chairs would be appropriate for this lesson. Air rifles and pellets should be kept separate during this lesson. Hand out Embark Air Rifle Operations Manuals before beginning.

Conducting the Lesson:

Sample Introduction: "The title of this lesson is "Equipment Nomenclature & Inspection." The purpose of this lesson is to familiarize you with the main parts of the rifle and pellet. We will also cover important inspection steps to ensure all equipment is in good working order before target shooting takes place."

Primary Air Riflery Safety Rules:

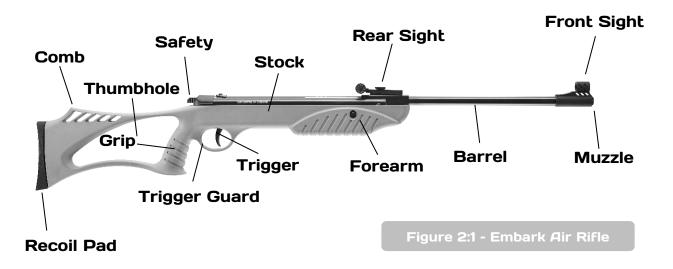
"When we begin rifle target shooting later, we will be following these simple rules to ensure everyone remains safe."

- **1.** "Always keep the muzzle pointed in a safe direction. (point to the muzzle and define safe direction for the range location)
- **2.** Always keep your finger outside the trigger guard until ready to shoot. (point to the trigger and trigger guard)
- **3.** Always positively identify your target; check both in front and behind for safety.
- 4. Always keep your safety on until ready to shoot." (point to the safety)

"In particular, while showing you the parts of the rifle today, it is imperative you always keep the muzzle pointed in a safe direction. For this discussion, the muzzle should be pointed straight up; in addition, you will notice the action is open. As you cover the parts today, keep the muzzle pointed in a safe direction, keep the action open, and keep the safety on."

The Embark Air Rifle - Nomenclature

- **a.** Have every student spread out so all can see the instructor. If the target shooting range is set up, students should be behind the waiting line.
- **b.** Review the primary rules of air rifle safety covered in the range set up and safety lesson and ensure everyone understands them.



- **c.** (**optional**) Provide each student or pair of students with an Embark air rifle and operations manual to refer to as parts are named.
- **d.** The instructor should point to the name of the parts on the rifle. "Notice, this rifle is an Umarex Embark Break Barrel Air Rifle. This is the only air rifle that is used

in the Student Air Rifle Program (SAR). It is acceptable to refer to it as the Embark, an air rifle, or a rifle." Students should follow the instructor by also pointing to and naming the part. In addition, briefly cover the purpose of each part. Make the following specific notes:

- i. "The Umarex Embark Air Rifle is a .177 caliber air rifle. This means it will only accept .177 caliber pellets. The caliber is usually stamped on most rifles and firearms on the barrel. On the Embark, the caliber designation is marked near the rear sight of the rifle, on the left side. To view the caliber stamp, you will need to close the barrel (demonstrate), make sure and keep your fingers away from the action to avoid pinching. This marking indicates what type of ammunition can be used, in this case, only .177 caliber pellets may be used safely. It is extremely important to use only ammunition that matches the markings on the rifle barrel, this is something to keep in mind when using any type of air rifle or firearm. After you have viewed the caliber marking, please slightly break the barrel back open, like this (demonstrate)."
- ii. "The Embark is a break-barrel air rifle. To "charge" the air rifle (provide air to expel the pellet), the barrel must be broken over. Until the rifle is charged, there will be resistance on the barrel, and this can serve as a pinch point; students should be watchful of the action. In addition, except when actually shooting, the barrel is always half-broke open so everyone can see it is unloaded. The Embark has a charging effort between 15 20 lbs."
- **iii.** "The thumbhole and grip provides a place for the hand to rest, away from the trigger."
- iv. "The safety is a mechanical safety device and can fail."
- v. "The rear sight can be adjusted if pellets are not striking the target where the student is aiming. For elevation adjustments (shooting high or low), turn the top wheel clockwise (if shooting high) or counterclockwise (shooting low). For windage adjustments (shooting to the right or left), turn the side wheel clockwise (if shooting to the left) or counterclockwise (shooting to the right)."
- e. Review the parts again by having the students call out the name of the part as the instructor points to each piece.
- **F.** "Notice, the Embark air rifle is ambidextrous and the same rifle can be used by right and left-handed students."

The Embark Air Rifle - Inspection

- **a.** "The air rifle should be inspected periodically to make sure it is safe to use. This should be done before beginning shooting lessons. The air rifle should also be inspected if it is dropped or looks or feels like something might be out of order."
- **b.** As when teaching the names of the air rifle parts, it would be ideal if the student had a rifle in hand when teaching this material. Use safe handling techniques as described earlier.

- **c.** "Now, we are going to cover the main points when it comes to inspecting the rifle. Maintenance of the air rifle will be covered in a later lesson." The following should be reviewed and covered.
 - Stock is secure and solid (check to make sure all screws are tight)
 - Safety is secure, solid, and in good working condition
 - Trigger and trigger guard is secure, solid, and in good working condition
 - Break barrel action is secure, solid, and in good working condition
 - Barrel is free of obstructions (physically look down the barrel from the breech end; show students when inspecting the barrel we **ONLY** look down the barrel from the breech end).
 - Exposed metal is free of rust
 - Rear sight is secure, solid, and in good working condition
 - Front sight is secure, solid, and in good working condition

The .177 Journey Pellet - Nomenclature

- a. Have every student spread out so all can see the instructor. If the target shooting range is set up, students should be behind the waiting line. Before passing out any pellets, collect all air rifles.
- **b.** Provide each student or pair of students with a container of Journey lead-free .177 caliber pellets to refer to.
- c. The instructor should have students read the container to ensure the caliber on the pellet container matches the caliber marked on the air rifle (.177 caliber). Discuss the importance of matching ammunition to caliber of the air rifle or firearm again.
- **d.** Point to the three main parts of a pellet (skirt, waist, and head).
- **e.** Review the parts again by having the students call out the name of the part as the instructor points to each piece.
- **F.** Cover the importance of using only lead-free Journey.177 caliber pellets for SAR shooting lessons.



The .177 Journey Pellet - Inspection

- **a.** The .177 pellet should be inspected before each shot to make sure it is safe to use. Pellets should also be inspected if they are dropped.
- **b.** As when teaching the names of the pellet parts, it would be ideal if the student had a pellet in hand when teaching this material.
- **c.** The instructor should list what the inspection will cover and what to do if inspection reveals an issue.
 - The head is fully intact
 - The skirt is hollowed out correctly, and is not "crimped" or bent in.
 - Pellet is not damaged in any way
 - If pellet is damaged it should be discarded and a different pellet should be used



 Only pellets that have not been shot before are allowed to be used. Pellets that have been shot will have rifling marks on the waist of the pellet.

Checks for understanding:

- a. Why is it important for students to know the proper names for rifle parts?
- b. Why is it important to inspect the rifle before shooting takes place?
- c. Why are only lead-free .177 caliber pellets used?
- d. Why is it important to match the ammunition exactly to the air rifle?

Lesson 2 Teaching Suggestions:

 Inserting a Pellet in the Chamber Backwards: If a student inserts a pellet in the chamber backwards with the waist in first, this pellet can be shot, however, it will likely not be accurate and this should be avoided. If possible, when the student realizes it is has been inserted backwards, try first to remove the pellet and insert another one correctly.

Lesson 3 - Determining Eye Dominance

Materials Needed:

 There should be a line on the floor for the students to stand behind (waiting line works)

Lesson Objectives:

Each student will learn which of their eyes is dominant. They will learn the importance of shooting a rifle using their dominant eye.

Classroom Application:

This lesson is conducted before students take their first shot.

Discussion:

Most people have one eye that is dominant over the other. When looking with both eyes open over a pointed finger, the dominant eye lines up over the finger more than the non-

dominant eye. Most people's dominant eye matches their dominant hand. In other words, most right handed people are right-eye dominant and vice-versa.

A few people have a dominant eye or master eve that is opposite the hand they use for routine tasks. In other words, a few right-handed people are left-eye dominant and vice-versa, this is called cross dominant. Even fewer people have eyes that are equally dominant otherwise known as codominant. It is beneficial for the student to know which eve is dominant and to shoot a rifle from the side of the face that is using the dominant eye regardless of the dominant hand. Learning to use a rifle with the dominant eye will lead to lifelong success in the shooting sports, particularly in other shooting sports such as a shotgun with moving targets.



Figure 3:1 - Eye dominance is important

Classroom Set-Up:

Rifles and pellets will be unnecessary during this lesson. In fact, this lesson can be performed without a shooting range. It will be helpful to have a waiting line for all students to stand behind.

Conducting the Lesson:

Sample Introduction: "The title of this lesson is Determining Eye Dominance. If you were invited to an arm wrestling contest, you would wrestle with your strongest arm if you wanted to win." The purpose of this lesson is to help the student learn which eye is dominant. Knowing this will determine whether the student would be best served shooting right handed or left handed. More than likely most students will know which eye is dominant since they have already participated in NASP®. Simply ask students if they shoot a left or right handed bow.

Aperture Method: Optometrists often use the aperture method for determining which



of their patient's eyes is dominant. To use this method, the students stand squarely facing and 3-4 yards or meters from the instructor. The students turns flat palms toward the instructor with fingers pointed up, as if using both hands to motion "stop". Make a small (eye-sized) window or 'aperture' by overlapping fingers and thumbs of the two hands. With both eyes open the student would look through the aperture

towards the instructor. The instructor will be able to see the student's dominant eye through this aperture. Likewise, the student can perform this exercise in front of a mirror and see their dominant eye in the aperture. Note: if looking in a mirror, remember the mirror reverses (right vs. left) the image.

Have students pair up and move 3-4 yards or meters apart and try the aperture method on each other.

If you or the student are uncertain about which eye is dominant there are two other exercises that can be tried described in (Teaching Suggestions: Point & Wink and Point at the Instructor's Nose).



Encourage students to shoot

their rifle using their dominant eye. In other words, a student that is right eye dominant

should shoot the rifle from the right side of their face putting the butt of the stock on their right shoulder and holding the forearm with their left hand. If the student is left-eye dominant, the student should shoot the rifle from the left side of their face putting the butt of the stock on their left shoulder and holding the forearm with their right hand.

Dominant eye advantages: Here are advantages to shooting a rifle with both eyes open and using the dominate eye for sight picture and aiming.

- Field of view is expanded
- Depth perception is heightened
- More available light
- Higher concentration is achieved

Note: Closing the non-aiming eye can cause eye strain and muscle fatigue.

If students have difficulty keeping both eyes open or if cross or codominance occurs, try using an occluder. An occluder can be made from a piece of frosted tape or a translucent material like a piece of plastic milk jug over the non-aiming eye safety glasses to disrupt the vision from that eye just enough for the dominant eye to take over.

Checks for understanding:

- **a.** When looking through the aperture, do the arms remain outstretched or move towards the eye?
- b. Which side of the face should a cross-dominant person shoot from?

Lesson 3 Teaching Suggestions:

- Point and Wink: Have students stand squarely facing a small, book-sized object about 10-50 yards or meters away. With both eyes open, raise either the left or right hand and point at the small object. Then alternatively close one eye and then the other. When the dominant eye is closed, the object or the pointing finger will appear to move.
- Point at Instructor's Nose: From a distance of 3-4 yards or meters have students stand squarely in front of the instructor. Then, the student will raise either the left or right hand and point at the instructor's nose. The instructor will see the dominant eye lined up over the pointed finger.

Lesson 4 - 11 Steps to Air Riflery Success

Materials Needed:

- Range set up to the specifications in Lesson 1
- Whistle and BARI guide for instructor
- Safety glasses
- Occluder material
- Ten Embark air rifles (in rifle racks at the beginning of instruction)
- Sight picture document

Lesson Objectives:

Students will learn eleven steps to perform ideal shooting technique and form.

Classroom Application:

This lesson is conducted before students take their first shot.

Discussion:

There are many keys to enjoying success in target shooting. It is important that the student's equipment fits and is in good working condition. The student

must also perform consistent shooting form from shot to shot. The student's shooting form is most effective when it allows the student to be stable, relaxed, and comfortable. In addition, it is important the student maintain proper muscle activity and body alignment throughout each shot.

During this lesson, the student will learn to follow eleven consecutive steps to promote life-long air riflery success. These steps will guide the student from initial form on the shooting line, through taking the shot and reflection of each shot.

Classroom Set-Up:

No actual shooting will take place during this lesson. However, the lesson should occur on a range that is fully set-up and operational including range lines, a safe backstop, target holders and an established target direction for students to simulate shooting. All students should be behind the waiting line as the class begins.

Conducting the Lesson:

Sample Introduction: "The title of this lesson is "11 Steps to Air Riflery Success". The purpose of the lesson is to learn proper form, how to take the shot, and follow-through." If you are able to master this process of shooting, you are more likely to enjoy a life-time of success in target shooting."

Before beginning the discussion, mention to the students a safety check should occur before any shooting lessons begin.

Safety Check: "Before we begin, we will perform a safety check. Here are the safety check completion steps.

1. Remember, safety should be a focus at all times. If you hear the whistle blown five or more times or a cease fire is called, there is an emergency on the range. It will sound like this (demonstrate). When an emergency is signaled, students must stop

what they are doing and assume the rifle ready position (immediately point the muzzle of their rifle straight up, keep your finger off of the trigger, break the barrel open, make sure the safety is engaged, and hold the rifle with the two-handed ready carry against your upper body). The instructor will explain further directions after blowing the emergency whistle command or calling a cease fire (covered in Lesson 1).

- **2.** Everyone should have safety glasses on.
- **3.** When handling the rifle and during the shooting process, make certain all of the primary air riflery safety rules (below) are followed. Carry the rifle with the two-handed ready carry. Make sure the safety is in the on position, and the barrel is slightly broke open where one can visually see the chamber is empty.
- **4.** Visually check for closed and locked room entrances to the side and behind the firing line (the instructor should perform this step before signaling students to the shooting line)."

Here's a reminder on the primary air riflery safety rules.

Primary Air Riflery Safety Rules:

- **1.** "Always keep the muzzle pointed in a safe direction. (point to the muzzle and define safe direction for the range location)
- **2.** Always keep your finger outside the trigger guard until ready to shoot. (point to the trigger and trigger guard)
- **3.** Always positively identify your target; check both in front and behind for safety.
- **4.** Always keep your safety on until ready to shoot." (point to the safety)

The instructor should first show and explain the "11 Steps to Air Riflery Success" to the class. After the steps have been explained and students have followed the instructor through each step, have students call out each step for the instructor to demonstrate again. Next use the two whistle command to bring the students to the shooting line, picking up a rifle on the way and have the students perform the steps using Embark air rifles. The pellets will be unused and stored away. Then have the class call them out as they perform the steps. If a student has difficulty with a particular step, refer them to more practice of this step.

- **a.** "I will demonstrate how to perform the steps first while you wait behind the waiting line and then you will have an opportunity to perform the steps too. I will now come behind the waiting line and blow two whistle blasts, allowing me to "get rifle" and approach the shooting line."
- **b.** "I'm walking to the rifle rack. I will pick up one of the Embark air rifles using the two handed ready carry we discussed earlier and follow the safety rules we just reviewed making certain the first thing I do is point the rifle in a safe direction. I will also make sure the safety is on, and the action is open."
- **c.** "I'm walking to the shooting line using the two handed ready carry, this is the only carry we will be using during our shooting lessons. Since I'm a right handed and

right eye dominant student, I'm facing to the right of the range. Left-handed and/or left eye dominant students will face the left side of the range. I'm going to keep both feet including my toes just behind the shooting line. I will now hold the Embark rifle against my upper body in the rifle ready position (muzzle up and in a safe direction, action open holding with the two-handed ready carry), this signifies to the instructor you are ready to begin the shooting process. Stay in this position until you hear further instructions.

d. "When everyone is standing with their Embark in the rifle ready position, I'll blow one whistle blast, like this (blow whistle) which means "shoot".

FORM

1. **Position:** "Like we discussed earlier, there are a number of shooting positions. During this program we will only be using the standing position, in some ways, it is similar to the stance used for archery. During this step, you will keep the Embark in the rifle ready position. If you are right eye dominant the left side of your body will be towards the target. Spread your feet shoulder-width apart with your lead foot (for a right dominant shooter this will be your left foot) almost touching the shooting line. Your body will be turned 90-95 degrees away from the target. Finally keep both legs and knees straight, however, keep your muscles relaxed. That forms the base for the standing position."



- 2. Charge Rifle: "With the Embark action open and the muzzle pointing down range, I will explain the charging process. Since shooting is not actually occurring yet, the rifle will actually not be charged and will remain with the action open. Rest the buttstock of the air rifle against the upper thigh of the left leg (if a right dominant student). Using the trigger hand, hold the grip area of the air rifle firmly, and grasp the barrel just behind the front sight with the opposite hand and pull the barrel down until it reaches end of movement. During the charging process, the barrel will be under spring tension. It is important to keep pressure on the barrel the entire time by keeping your hand on the barrel from the time you pull down, after it clicks, and until you close the barrel completing the loading process. More detail will be explained later when shooting occurs."
- **3. Load:** "With the barrel pointed downrange, I will explain how a single pellet can be inserted into the rear of the barrel. Since shooting is not actually occurring yet, the rifle will actually not be loaded; I will simply pretend to put in a pellet and then

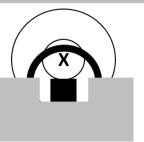
close the action. The flat nose of the pellet is positioned forward in the barrel, the skirt of the pellet facing the rear. After loading the pellet, the barrel can be closed; ensure the barrel closes completely."

- **4. Shoulder Rifle:** "After loading the rifle, and while still holding the rifle with both hands (the rifle hand firmly holding the forestock and the trigger hand grasping the thumbhole grip with fingers off the trigger and outside the trigger guard) bring the butt high onto the shoulder pocket on the side of the body with the dominant eye and the stock against your cheek (right cheek for right eye-dominant students). Your head should remain upright (demonstrate). After mounting the rifle, it should be close to parallel to the floor/ground with the barrel pointed downrange towards the target."
- **5. Rifle Hand Set:** "The rifle hand will be the left hand for a right dominant student and the right hand for a left dominant student. The rifle hand will hold the rifle steady and forms the frontward support to take a supported shot. While holding the stock, relax the arm and tuck the elbow into the side of your body directly under the rifle to form a solid support to hold the rifle up steady. Once the arm is set, it is time to set the hand. There are multiple rifle hand positions depending on torso and arm length. Start out with the fist position (like this). If the rifle is too high or too low (to keep your head erect and align the sights) you can try other rifle hand positions. I will work with each of you when you come up to the line to determine the best rifle hand position for you." Note: refer to rifle hand positions near the end of this lesson.
- **6. Release Safety:** "After you have verified the target is in a safe direction to shoot, pretend to push the safety forward, however, since shooting isn't occurring yet, the safety should remain on."
- 7. **Trigger Hand Set:** "The trigger hand will wrap around the grip area of the stock lightly with the trigger finger (index finger) resting on the stock outside and above the trigger and trigger guard. The trigger hand will be the right hand for a right dominant student and the left hand for a left dominant student."

TAKING THE SHOT

Figure 4:2 - Correct Sight Picture

8. Aim (Sight Picture): "Your dominant eye should align the front sight with the rear sight on the proper bullseye. The bullseye on the target you are shooting at should appear to rest on the top of the front sight. If you are on the left side of the target you will shoot the left bullseye, if you are on the right, shoot at the right bullseye. At this point I want you to concentrate on the fundamentals of shooting more than hitting the bullseye perfectly. Remember to keep both eyes open."



9. Shot Set-Up: "Take a normal breath and exhale. Gently hold your breath while you prepare to squeeze the trigger. Minimize the amount of movement as you settle in on the bull's eye. If you are unable to complete the shot within 4 – 10 seconds, take another breath and start the process again."

10. Shoot (Squeeze the Trigger): "Since shooting is not actually occurring yet, the trigger will not actually be squeezed. In fact, if a rifle is shot without being loaded it is called a dry-fire and it could damage the rifle. When actually shooting, the shooter will begin a slow squeeze of the trigger (while maintaining the appropriate sight picture)."

REFLECTION

11. Follow-Through, Reflect, and make Safe: "Upon the shot, the air rifle should be held in the shooting position momentarily with the face still on the stock, then dismounted. When we are actually shooting later you will replace the safety back to the safe position and open the action (in this case leave it on safe) after you have completed the follow-through. In addition, when shooting actually occurs, you will consider whether your rifle mount, face position on the stock, arm positions, and trigger squeeze are consistent for each and every shot. This process will be explained in more detail later.

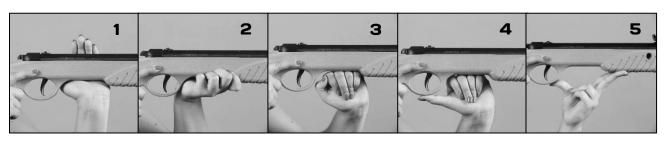
After the initial 11 steps have been discussed, put the rifle back in the rack and explain the aiming process with more detail. Use the sight picture document (Appendix 6) for demonstration and show students how sight alignment and the sight picture should look. After reviewing the aiming process, mention students can practice trigger squeeze with ball point pens as homework. Suggest students practice squeezing the plunger on the pen using the pad of the trigger finger and pulling straight back.

After those two explanations have been covered, approach the shooting line again and have the students call out the 11 steps while you perform them. Next, go behind the waiting line and explain the students will now be practicing the steps. Blow the whistle twice, have students approach the shooting line in the rifle ready position. Once everyone is in position, blow the whistle one time to "shoot". Have students call out the 11 steps as they perform them. Work with each student individually, as needed, especially for the correct rifle hand set to ensure the standing position is being performed correctly and safely. If you have more than one group, rotate the groups until everyone has completed the activity. Make sure pellets are not present.

Rifle Hand Positions (5 options):

- 1. Palm (lowest position)
- 2. Cradle
- 3. Fist
- 4. Open Fist
- 5. Thumb/Split Cradle (highest position)

Figure 4:3 - Rifle Hand Positions



Basic Air Riflery Instructor (BARI)

Checks for understanding:

- a. Why is it important to practice the 11 steps first without actually shooting?
- **b.** Why is it important students and instructors (everyone) constantly check for a safe direction?
- c. When charging the rifle, why is it important to hold the barrel the entire time?
- d. Why is important to slowly squeeze the trigger?

Lesson 4 Teaching Suggestions:

- **Avoid pinching Fingers while closing the action:** Keep the hands away from the action when closing to avoid pinching fingers or any part of the hand.
- **Placing the trigger hand correctly:** When grasping the grip of the stock, avoid rotating the hand over the grip. The hand should be placed alongside the grip instead of over the top of it.
- Automatic Safety: Some students may notice the Embark is equipped with an automatic safety that comes on when the rifle is charged. This is a nice feature, but should not be relied on. Instead, students should get in the habit of manually putting the rifle on safe. This procedure will also allow students to safely and successfully transition to other rifles or firearms that do not have automatic safeties.
- Trigger Squeeze: Students can practice trigger squeeze with a spring loaded ball point pen. Practice squeezing the plunger on the pen using the pad of the trigger finger and pulling straight back.
- Occluders and Blinders: Students can use frosted tape or other translucent material to make occluders for the nonaiming eye and can use target paper or thin cardboard for side blinders.
- LOP Extension: A Length of Pull (LOP) extension is available for the Embark rifle and allows for a more custom fit and positive shooting experience for some students.



Lesson 5 - Taking the First Shot

Materials Needed:

- Whistle and BARI guide for instructor
- The range must be set up and equipped to operate in the manner described in Lesson 1
- Safety glasses
- Occluder material
- Ten Umarex Embark air rifles
- Enough Journey pellets for up to 10 shots per student
- One 6" reactive target per student
- Paper bullseye targets (dependent upon number of students)
- Ten pellet containers (archery quivers may be used with a modified holder on top to hold pellets)
- Poster or banner of the "11 Steps to Air Riflery Success" where everyone can reference

Lesson Objectives:

Students will experience how the range lines and whistle signals are used to move about the range in a safe manner. The student will practice the "11 Steps to Air Riflery Success" to take their first shot with an air rifle.

Classroom Application:

In this lesson, students will take their first, but closely supervised shots.

Discussion:

The student will put most of the previous lessons together in this session to experience a positive, safe, and successful shooting activity. The instructor will use the CPR technique to properly correct a student's performance of the "11 Steps to Air Riflery Success". The student will learn that all range safety rules must be followed very closely in order for the range to be operated in an efficient and safe manner.

The instructor will demonstrate every aspect of the

shooting experience during this session. Toes are behind lines and the whistle signals are used to trigger specific range activities. The instructor will supervise the first few shots for every student making sure proper form and safety rules are followed throughout the shot sequence.

The instructor will demonstrate how rifles are made safe after shooting and returned to the rifle racks. Finally, the instructor will make sure all equipment and people are safely back at the equipment and waiting line area before shooting recommences.

Classroom Set-Up:

The rifle range must be laid out according to the specifications described in Lesson 1. If this is the beginning of a class or after a break, the instructor should look behind the backstop net and targets to make sure these areas are clear of people, expensive equipment and objects that a pellet could rebound from. All students should be behind the waiting line. Five target backstops should have two reactive targets on them ready for shooting. The first target on the left should have three reactive targets (one for the instructor to demonstrate). Floor pellet storage containers should be empty except the lead instructor should have controlled yet easy access to pellets for demonstration and for students use after instruction. The instructor should have enough pellets in a controlled storage container to provide ten stations with shooting opportunities for however long the session will last.

If there is insufficient equipment or space (air rifles, pellets, targets, and backstop nets) for all students to shoot simultaneously, the class should be divided into groups according to the amount of equipment. There should also be a minimum of one instructor per ten students that are target shooting. For instance, if there are 21 students and 10 air rifles, form an "A" group of 7 students, a "B" group of 7 students and a "C" group of 7 students. The groups will take turns shooting. Students waiting to shoot can be acting as assistant coaches for the students that are shooting and/or paying attention to the shooting and range operation process.

The instructor(s) should begin the lesson from in front of the waiting line where everyone can see and hear instructions.

Note: The BARI should make sure Embarks have been inspected and sighted in for the distance students will be shooting.

Conducting the Lesson:

To promote standardization, the following script is provided for the lead instructor to present. It is important that the script be followed as closely as possible to assure all material is concisely covered at exactly the right moment.

Introduction: (presented from in front of the waiting line with students behind the waiting line)

The instructor says... "Good morning/afternoon. Today I'm going to present beginning air rifle target shooting lessons. Target shooting is a fun and safe activity. To keep it safe, make certain you pay close attention to today's lesson. You are all standing behind the waiting line – every toe?" (check)

Safety Check: "Before we begin, we will perform a safety check. Here are the safety check completion steps.

- 1. Remember, safety should be a focus at all times. If you hear the whistle blown five or more times or a cease fire is called, there is an emergency on the range. It will sound like this (demonstrate). When an emergency is signaled, students must stop what they are doing and assume the rifle ready position (immediately point the muzzle of their rifle straight up, keep your finger off of the trigger, break the barrel open, make sure the safety is engaged, and hold the rifle with the two-handed ready carry against your upper body). The instructor will explain further directions after blowing the emergency whistle command or calling a cease fire.
- **2.** Everyone should have safety glasses on.
- **3.** When handling the rifle and during the shooting process, make certain all of the primary air riflery safety rules (below) are followed. Carry the rifle with the two-

handed ready carry. Make sure the safety is in the on position, and the barrel is slightly broke open where one can visually see the chamber is empty.

4. Visually check for closed and locked room entrances to the side and behind the firing line (the instructor should perform this step before signaling students to the shooting line."

Here's a reminder on the primary air riflery safety rules.

Primary Air Riflery Safety Rules:

- **1.** "Always keep the muzzle pointed in a safe direction. (point to the muzzle and define safe direction for the range location)
- **2.** Always keep your finger outside the trigger guard until ready to shoot. (point to the trigger and trigger guard)
- **3.** Always positively identify your target; check both in front and behind for safety.
- **4.** Always keep your safety on until ready to shoot." (point to the safety)

Demonstrating the Shot:

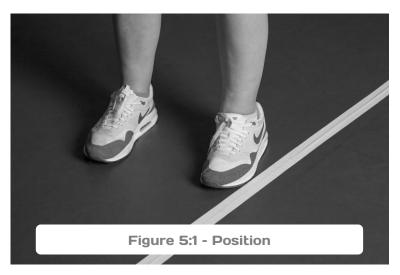
The instructor says and does...

- **a.** "Now I'm going to show you how we follow the lines and whistle signals on the rifle range. Some of this will sound familiar from when we practiced the 11 steps without shooting."
- **b.** "I'm going to step behind the waiting line with you. I want you to remain behind this waiting line while I demonstrate how to use the whistle commands and lines to move about the rifle range."
- c. "Two whistle blasts means get rifle." (blow and walk to the rifle rack)
- **d.** "I'm walking to the rifle rack. I will pick up one of the Embark air rifles using the two handed ready carry we discussed earlier and follow the safety rules we just reviewed making certain the first thing I do is point the rifle in a safe direction. I will also make sure the safety is on, and the action is open."
- e. "I'm walking to the shooting line using the two handed ready carry, this is the only carry we will be using during our shooting lessons. Since I'm a right handed and right eye dominant student, I'm facing to the right of the range. Left-handed and/or left eye dominant students will face the left side of the range. I'm going to keep both feet including my toes just behind the shooting line. I will now hold the Embark rifle against my upper body in the rifle ready position (muzzle up and in a safe direction, safety on, action open holding with the two-handed ready carry), this signifies to the instructor you are ready to begin the shooting process. Stay in this position until you hear further instructions.
- **F.** "When everyone is standing with their Embark in the rifle ready position, I'll blow one whistle blast, like this (blow whistle) which means "shoot".
- **g.** "After hearing one whistle blast you can begin the "11 Steps to Air Riflery Success" we practiced."

FORM

 Position: "Like we discussed earlier, there are a number of shooting positions. During this program we will only be using the standing position, in some ways, it

is similar to the stance used for archery. During this step, you will keep the Embark in the rifle ready position. If you are right eye dominant the left side of your body will be towards the target. Spread your feet shoulder-width apart with your lead foot (for a right dominant shooter this will be your left foot) almost touching the shooting



line. Your body will be turned 90-95 degrees away from the target. Finally keep both legs and knees straight, however, keep your muscles relaxed. That forms the base for the standing position."

2. Charge Rifle: "With the Embark action open and the muzzle pointing down range, rest the buttstock of the air rifle against the upper thigh of the left leg (if a right dominant student). Using the trigger hand, hold the grip area of the air rifle firmly, and grasp the barrel just behind the front sight with the opposite hand and pull the barrel down until you hear a "click". The "click" indicates it is been charged, did you hear it?" During the charging process, the barrel will be under





spring tension. It is important to keep pressure on the barrel the entire time by keeping your hand on the barrel from the time you pull down, after it clicks, and until you close the barrel completing the loading process."

- **3.** Load: "Now, I'm going to demonstrate the loading process. With the barrel pointed downrange and the action open, pick up a pellet with your right hand and insert the pellet into the chamber like this. (demonstrate) During this process your trigger hand should still be keeping pressure on the barrel. The flat nose of the pellet is positioned forward in the barrel, the skirt of the pellet facing the rear. After loading the pellet, the barrel can be closed; ensure the barrel closes completely. Be careful when closing to avoid pinching fingers. In addition, make sure the pellet stays seated properly when closing, if you close and pinch the pellet the rifle will not work properly."
- **4. Shoulder Rifle:** "After loading the rifle, and while still holding the rifle with both hands (the rifle hand firmly holding the forestock and the trigger hand grasping the thumbhole grip with fingers off the trigger and outside the trigger guard) bring the butt high onto the shoulder pocket on the side of the body with the dominant eye and the stock against your cheek (right cheek for right eye-dominant students). Your head should remain upright (demonstrate). After mounting the rifle, it should be close to parallel to the floor/ground with the barrel pointed downrange towards the target."
- **5. Rifle Hand Set:** "The rifle hand will be the left hand for a right dominant student and the right hand for a left dominant student. The rifle hand will hold the rifle steady and forms the frontward support to take a supported shot. While holding the stock, relax the arm and tuck the elbow into the side of your body directly under the rifle to form a solid support to hold the rifle up steady. Once the arm is set, it is time to set the hand. There are multiple rifle hand positions depending on torso and arm length. Start out with the fist position (like this). If the rifle is too high or too low (to keep your head erect and align the sights) you can try other rifle hand positions. I will work with each of you when you come up to the line to determine the best rifle hand position for you." **Note:** students should know which rifle hand position to use since they practiced earlier.
- 6. Release Safety: "After you have verified the target is in a safe direction to

shoot, use your trigger hand to push the safety forward. You will notice there is now a red circle by the safety, indicating the rifle is on fire." (demonstrate)

7. Trigger Hand Set: "The trigger hand will wrap around the grip area of the stock lightly with the trigger finger (index finger) resting on



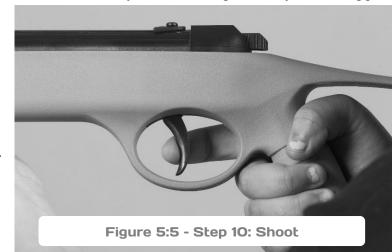
the stock outside and above the trigger and trigger guard. The trigger hand will be the right hand for a right dominant student and the left hand for a left dominant student."

TAKING THE SHOT

- 8. Aim (Sight Picture): "Your dominant eye should align the front sight with the rear sight on the proper bullseye. The bullseye on the target you are shooting at should appear to rest on the top of the front sight. If you are on the left side of the target you will shoot the left bullseye, if you are on the right, shoot at the right bullseye. At this point I want you to concentrate on the fundamentals of shooting more than hitting the bullseye perfectly. Remember to keep both eyes open."
- **9.** Shot Set-Up: "Take a normal breath and exhale. Gently hold your breath while you prepare to squeeze the trigger. Minimize the amount of movement as you settle in on the bull's eye."

10.Shoot (Squeeze the Trigger): "Move your index finger slowly to the trigger.

The first pad of your index finger should be positioned at the low point in the trigger. Begin a slow squeeze of the trigger while maintaining the appropriate sight picture. The trigger should be pulled with the pad of the trigger finger."



REFLECTION

11. Follow-Through,

Reflect, and make Safe: "Upon the shot, the air rifle should be held in the shooting position momentarily with the face still on the stock, then dismounted. If the rifle did not go off or sounded different than normal, raise your hand for help from the instructor. After follow-through, replace the safety back to the safe position, like this (demonstrate) and open the action like this (demonstrate). Consider whether your rifle mount, face position on the stock, arm positions, and trigger squeeze are consistent for each and every shot. Maintain a safe muzzle direction as you prepare to shoot again. Since we are using reactive targets for your first shots, you should be able to see your shot on the target."

- **h.** "I'll shoot again." (drop a pellet on the floor in front of the shooting line)
- i. "Whoops, if you drop a pellet, **LEAVE IT** on the floor or ground, I'll pick it up when we are retrieving targets. Raise your hand and I will give you a replacement pellet for having followed this rule."

- **j.** Shoot a pellet; talking less, but still saying each of the "11 steps". In addition, explain in more detail that sometimes pellets become stuck in the barrel and must be removed before more pellets can be inserted.
- k. "When finished shooting, break the barrel slightly open on the Embark like this (demonstrate) and assume the rifle ready position (muzzle up, two-handed ready carry, uncharged, unloaded, action open, against your body). Remain in the rifle ready position until the instructor gives the "return rifle" command consisting of 2 whistle blasts. Upon hearing the "return rifle" command, maintain safe control of the muzzle direction, replace the rifle on the rack with the muzzle up, and walk back behind the waiting line to await further instructions. (demonstrate) Only go down range to retrieve targets when you have received instruction to do so."

Supervising the Shot: (address the class from behind the shooting line) (no pellets are in pellet holders and the instructor is holding the container of pellets) (all rifles are unloaded, uncharged, and are racked with the action open).

The instructor says and does...

- I. "Now you're going to shoot."
- m. "Everyone's toes are behind the waiting line?" (check-blow two whistle blasts) "Everyone walk to get rifles. Go to the shooting line carrying your rifle with the two-handed ready carry with the muzzle pointed up, assume the rifle ready position with the Embark and wait for the one whistle command to begin the "11 Steps to Air Riflery Success"."
- **n.** "Since I'm going to observe your first shots, I will provide pellets when it is your turn to shoot."
- When I blow the whistle one time that means to shoot. However, the first time everyone wait until I come by to give you pellets so I can observe your performance of the eleven steps. I'll start here on the left end of the shooting line so I can watch all students as I supply them with pellets. Please wait patiently until I get to you."
- p. Go to the first student on the far left (facing the targets) of the shooting line. Once you have verified everyone is in the rifle ready

CPR Reminder

- Compliment: Before corrective advice is provided, the instructor should first compliment the student on some aspect of his/her technique.
- Positive Correction:
 The instructor can reinforce
 the desired action by
 providing positive corrective
 advice describing the
 desired action the student
 should work on.
- Review: Finally, the instructor should observe or review the student's next shot sequence to provide feedback about whether or not the improvement was achieved.

position, blow the whistle "shoot" signal and then place five pellets in this first student's pellet holder. Direct the student to shoot at the target on the left side of the target backstop that you didn't shoot at when demonstrating. Have the student say and do the 11 steps. Use CPR to improve the student's performance of the 11 steps.

q. Move through each student in this manner. Talk each student through the shot following the 11 steps. As soon as a student is performing the steps correctly, move on to the next student. Use the reactive targets for students to "self-correct" sight alignment and step number 8 of aiming and establishing a sight picture. As you leave the student tell him/her, "When finished shooting your pellets, assume the rifle ready position and remain in that position until I give the "return rifle" command consisting of 2 whistle blasts. Upon hearing the "return rifle" command, maintain safe control of the muzzle direction, replace the rifle on the rack with the muzzle up, and walk back behind the waiting line to await further instructions. Only go down range to retrieve targets when you have received instruction to do so."

Retrieving Targets: (begins with all students behind the waiting line and instructor in front) (**Note:** The BARI should consistently watch the shooting line during the process to ensure no students are near the rifles or equipment while students are forward of the shooting line. **Reminder:** The instructor maintains pellets at all times).

The instructor says and does...

- **r.** Before blowing the "go check targets" 3 whistle signal the instructor should first verify all rifles are properly racked and then move near any dropped pellets. These pellets must be picked up, inspected, and placed back into the instructor controlled pellet supply when the whistle signal is given to check targets.
- **s.** When all students are finished shooting, behind the waiting line, and air rifles are properly secured, blow three whistles and say, "Go check targets." Remind students to walk and stop at the target line for demonstration. The instructor should be the first to the target line to make sure students stop.
- **t.** With all students behind the target line, go to the target you shot during demonstration and position yourself where all students can see.
- **u.** Instructor says, "Each student can stand just behind the target line and observe the shots on their target, once both students have checked their targets they can put up new targets one at a time, like this. (demonstrate) Our first shots were on reactive targets where you could see where you hit; you can add pasters to extend the life of this target."
- v. Walk up and down the target line looking for correct procedure.
- **w.** When all students have left the target area, look behind the backstop net and targets to make sure no student or pellets remain.
- **x.** "That's all there is to it."
- **y.** Once students have finished checking and changing out targets, they can return behind the waiting line.

If there are additional groups waiting to shoot, repeat the process.

Removing a Jammed Pellet: It is preferred for a pellet to be shot from the barrel, however, sometimes, pellets become stuck in the barrel. If an instructor hears an "off" sound like a squib load, it is likely the pellet did not exit barrel and may be stuck. This can be verified by opening the action and looking through the barrel from the breech end. First, trying charging and shooting the rifle again to remove the pellet. If that doesn't work, remove the pellet by inserting a cleaning rod or wire into the breech and push the pellet out the muzzle.

Checks for understanding:

- **a.** Why should the instructor start on the left end of the shooting line when supervising the first shot of each student?
- **b.** Why is CPR used to improve shooting fundamentals?
- c. Why are reactive targets used for the first shots?
- d. How is the standing position similar to archery?

Lesson 5 Teaching Suggestions:

- Charged Rifle in Rifle Rack: Once a rifle has been charged, there will no longer be resistance on the barrel when broke open. Therefore, if a rifle will not sit in the rifle rack with the barrel half-open, it is likely the rifle has been charged, and will need to be discharged before continuing.
- Verbalizing the process: It is positive reinforcement for the student to verbally explain to the instructor the steps of shooting. Repetition of the correct process is an important key to success.
- Adjusting Sights: Even though the rifles should be sighted in before the lesson begins, sometimes sights might get bumped. If an instructor notices the student has a "group" away from the bullseye, the instructor should consider adjusting the sights.
- The weight of the air rifle is a surprise: New shooters may find the weight of the air rifle more than they are used to holding for any length of time. It is beneficial to all students to begin a moderate weight lifting program using two or three pound hand weights. This will increase the upper body strength and allow better control of the air rifle.
- Control the muzzle when preparing to shoot: There is a tendency for students to think they must completely stop the barrel movement prior to the shot. The key is "control" of the barrel. The shooter should learn to deliberately control the movement of the barrel. Some students may use a slow rise to the bullseye, while others may find the technique of drawing a slowly closing circle around the bullseye gives the best control.
- When to shoot: A common problem for new shooters is holding the air rifle too long on target. When the air rifle is held for too long, the barrel movement tends to increase. The shooter should recognize the problem, then dismount the air rifle, relax the shoulders, then remount the air rifle and begin the breathing process again.

Lesson 6 - Target Shooting Practice

Materials Needed:

- Whistle and BARI guide for instructor
- The range must be set up and equipped to operate in the manner described in Lesson 1
- Safety glasses
- Umarex Embark air rifles (dependent on student #)
- Journey pellets (dependent on student #)
- Paper or shoot-n-c bullseye targets (dependent on student #)
- Ten pellet storage containers (archery quivers may be used with a modified holder on top to hold pellets)
- Poster or banner of the "11 Steps to Air Riflery Success"

Lesson Objectives:

After students have taken their first shots and are consistently performing the 11 steps correctly, the instructor will put all previous lessons together to continue target shooting practice.

Classroom Application:

After students have a solid understanding of the 11 steps, it is important for students to practice target shooting using these proven steps to become proficient.

Discussion:

After students have been successful mastering the "11 Steps to Air Riflery Success", target shooting practice with students will become routine for the instructor and students.

Classroom Set-Up:

The rifle range must be laid out according to the

specifications described in Lesson 1. If this is the beginning of a class or after a break, the instructor should look behind the backstop net and targets to make sure these areas are clear of people, expensive equipment and objects that a pellet could rebound from. All students should be behind the waiting line. Five target backstops should have two targets on them ready for shooting. The instructor should have enough pellets in a

controlled storage container to provide ten stations with shooting opportunities for however long the session will last.

If there is insufficient equipment or space (air rifles, pellets, targets, and backstop nets) for all students to shoot simultaneously, the class should be divided into groups according to the amount of equipment. There should



also be a minimum of one instructor per ten students that are target shooting. For instance, if there are 21 students and 10 air rifles, form an "A" group of 7 students, a "B" group of 7 students and a "C" group of 7 students. The groups will take turns shooting. Students waiting to shoot can be acting as assistant coaches for the students that are shooting and/or paying attention to the shooting and range operation process.

The instructor(s) should begin the lesson from in front of the waiting line where everyone can see and hear instructions.

Conducting the Lesson:

Sample Introduction: "The title of this lesson is "Target Shooting Practice". We have covered some important topics and everyone has been performing the 11 steps well. You will notice now I'm incorporating all previous lessons to run the range safely and effectively. You will continue perfecting the 11 steps with additional target shooting practice."

Safety Check: "Regardless of how many days the students have been shooting, or how much experience they have, the instructor should begin each shooting lesson with a safety check.

- 1. Remember, safety should be a focus at all times. If you hear the whistle blown five or more times or a cease fire is called, there is an emergency on the range. It will sound like this (demonstrate). When an emergency is signaled, students must stop what they are doing and assume the rifle ready position (immediately point the muzzle of their rifle straight up, keep your finger off of the trigger, break the barrel open, make sure the safety is engaged, and hold the rifle with the two-handed ready carry against your upper body). The instructor will explain further directions after blowing the emergency whistle command or calling a cease fire.
- **2.** Everyone should have safety glasses on.
- **3.** When handling the rifle and during the shooting process, make certain all of the primary air riflery safety rules (below) are followed. Carry the rifle with the two-handed ready carry. Make sure the safety is in the on position, and the barrel is slightly broke open where one can visually see the chamber is empty.
- **4.** Visually check for closed and locked room entrances to the side and behind the firing line (the instructor should perform this step before signaling students to the shooting line)."

Make sure the primary air riflery safety rules are followed (by this point the students should be able to say the safety rules without hesitation; consider having the students call them out to you).

Primary Air Riflery Safety Rules:

1. "Always keep the muzzle pointed in a safe direction. (point to the muzzle and define safe direction for the range location)

- **2.** Always keep your finger outside the trigger guard until ready to shoot. (point to the trigger and trigger guard)
- **3.** Always positively identify your target; check both in front and behind for safety.
- 4. Always keep your safety on until ready to shoot." (point to the safety)

Targets and Distance: Since students have been shooting regularly, they may want to try different targets or distances for a challenge. In addition, students should be allowed to post their own targets on the target backstops. Only move students back when the whole line of students is ready (proficient at 10 meters), and make absolutely certain all students are shooting from the same distance at the same time. Be sure that waiting line spacing of 4 yards or meters is maintained behind the shooting line and rifle racks are moved accordingly. **Reminder:** The minimum distance to shoot is 10 meters.

Follow the Process: The instructor should make sure and follow all core processes covered in all previous lessons. While running the range and coordinating effective target shooting practice, the instructor is combining all processes to form a holistic experience (safe range layout/set-up and target shooting safety, coaching techniques, equipment nomenclature and inspection, eye dominance, 11 Steps to Air Riflery Success, the first shot procedures).

Check Equipment Frequently: Since target shooting has been occurring frequently and likely with several different class periods, it is very important to check the equipment regularly for proper working condition. It is especially important to check the targets for pellet buildup (potential ricochet), air rifles, and netting material.

Reminder - Safe Equipment Storage: While running the range, it is imperative the BARI follow all guidelines regarding storage and access to equipment. If the BARI is not in immediate supervision of equipment at any time, it should be locked and stored in a way that prevents misuse.

Checks for understanding:

a. Why is important to continue coaching and monitoring student performance of the 11 Steps to Air Riflery Success?

Lesson 6 Teaching Suggestions:

- Follow the "11 Steps to Air Riflery Success": While running the range and facilitating target shooting practice, it is imperative instructors maintain a priority for safety and focus on the 11 steps.
- Entire classroom involvement: All students may not be able to shoot at once. For students that are waiting to shoot, consider having them act as assistant coaches for students that are shooting.
- **Practice an emergency:** Without warning students, consider blowing an emergency whistle or yelling cease fire to make sure students react correctly.

Lesson 7 - Air Riflery Games

Materials Needed:

- Whistle and BARI guide for instructor
- The range must be set up and equipped to operate to specifications in Lesson 1
- Embark Air Rifles
- Journey pellets

Lesson Objectives:

After considerable air riflery practice has occurred, the instructor will introduce safe and fun air riflery games.

Classroom Application:

This lesson is designed to be completed after considerable target shooting has taken place.

Discussion:

After students have been successful mastering the "11 steps to Air Riflery Success", it is appropriate to add another challenge to the shooting process by having some safe fun with target shooting games. **However, safety should always be the focus and the "11 steps to Air Riflery Success" should still be followed closely.**

Classroom Set-Up:

The rifle range should be set up with rifles on racks and pellets controlled by the BARI. Students will be behind the waiting line.

Conducting the Lesson:

Sample Introduction: "The title of this lesson is "Air Riflery Games". The entire class has been doing a great job following safety rules and everyone is progressing well. I think it is time to try some target shooting games, do you agree?"

Here are examples of games the instructor can use:

Balloon Bust: The instructor will place balloons on the target holders of various sizes. Students will then shoot at the balloons in no particular order and with no scoring taking place. This is a great game to start out with to get students having fun.

Class Competition: This game requires the use of standard SAR targets with 5 bullseyes on each target. The instructor will divide the class into equal teams (3 or more per team) and place the appropriate number of targets on the holder. Have each team stand in a row behind the waiting line until the whistle is blown. One at a time, a student from each team goes up to the shooting line and shoots 5 pellets (one at each bullseye) on their target. When finished, each return to the waiting line to let the next student from their team shoot. Limit the shooting time to 5 minutes each, and let the students shoot and score two times. The top combined score wins.

Tic-Tac-Toe: Draw a tic-tac-toe grid on two pieces of 8.5 x 11 paper. Place two (one on the right for the right shooter and one on the left for the left shooter) on a target

holder. The students will be playing head-to-head however, to keep track of each

persons "move" they will shoot on their own tictac-toe grid.

Shoot Out: During this game, the instructor will pair up students and students will be shooting for an individual score. The instructor will place 2 standard SAR targets with 5 bullseyes on each target holder. Each student will take 5 shots (one at each bullseye on their target), allow 5 minutes per student. Complete the process until all students have participated. Gather scores from students and declare the 3rd, 2nd, and 1st place winners. Ties are broken by the number of "10s", "9s", etc.

SAR Tournaments: Explain opportunities to students for organized competition are available through SAR tournaments. Students have the opportunity to compete on a level playing field where everyone uses Embark air rifles and Journey pellets shooting 30 shots at 10 meter



targets while standing. For more information on SAR tournaments, visit <u>www.studentairrifleprogram.org</u>.

Checks for understanding:

a. Why is it important to offer games that focus on team scores and individual scores?

Lesson 7 Teaching Suggestions:

- Follow the "11 Steps to Air Riflery Success": It is imperative instructors maintain a priority for safety and focus on the 11 steps. Students may be so enthralled with the games they forget to follow solid shooting fundamentals.
- **Consider Prizes:** To encourage the competition and award students, consider offering small prizes to the individual winners and team winners if possible.
- Shoot the "Z": To teach students how to shoot a competition target systematically, try using a "Z". For example, on a 5 bull target, start in the upper left corner, then the upper right corner, followed by the center, lower left, and finally the lower right.
- **Some Students May not Participate:** Some students may not want to participate in the competitions. Offer them an opportunity to be an assistant coach to other students on the range, or co-operate the range with whistle commands.

Lesson 8 - Equipment Maintenance & Repair

Materials Needed:

- Whistle and BARI guide for instructor
- Embark Air Rifle (one for the instructor to demonstrate)
- Embark Air Rifle Operation Manual (one for each pair of students)
- Umarex/SAR .177 caliber Maintenance Kit
- Cleaning pellets
- Chamber lube
- Spring cylinder oil
- Paper towels or cloth
- Chairs for students to sit in or in an open area

Lesson Objectives:

The instructor will cover necessary maintenance and repair of the Umarex Embark Air Rifle.

Classroom Application:

This lesson is designed to be completed after considerable target shooting has taken place.

Discussion:

It is important to keep air rifles in good working order. This is accomplished through simple maintenance. The owner's manual should always be consulted for information on maintenance and operation. If an instructor or a student is unsure how to address a concern on the air rifle, the manufacturer should be consulted.

Classroom Set-Up:

A classroom or the range is appropriate, it is helpful to have a table present to lay cleaning materials on. No shooting will occur during this lesson. Hand out Embark Air Rifle Operation Manuals at the start of the lesson.

Conducting the Lesson:

Sample Introduction: "The title of this lesson is "Equipment Maintenance & Repair". It is important to keep air rifles in good working order. This is accomplished through simple maintenance. I will show you some of the important maintenance items on the air rifle and refer to the operation manual as well. You will notice, I will only be using the maintenance kit provided and I'm only using oil (non-petroleum based) (petroleumbased oils can cause dieseling effect) for the air rifle. Let's review the basics."

"Before we begin, we must make sure we follow all of the safety rules related to the rifle. During maintenance sessions, make sure the muzzle is always pointed in a safe direction, the action is open, and the safety remains on; pellets should not be present during maintenance sessions."

Maintenance:

Working Parts: (demonstrate) "After 100 shots, stock screws should be checked and tightened if needed. Every 1,000 shots, we apply chamber lube with the applicator needle to the compression chamber port like illustration 9 in the Embark operations

manual. In addition, apply spring cylinder oil to the working parts like in illustration 10 in the manual."

Barrel: (demonstrate) "The barrel needs to be periodically cleaned as well. To clean the barrel we use the .177 caliber flexible cleaning rod with a cleaning pellet or patch lightly coated in chamber lube. We insert the flexible cleaning rod from the breech end."

Surface: (demonstrate) "Since the air rifle has metal parts, it is subject to rust. To prevent rust, we wipe down all exposed metal parts with a cloth and a light coat of spring cylinder oil."

Repair:

"There is little repair items to be done on the Embark Air Rifle, if the air rifle isn't' working properly consult the manufacturer for advice."

Storage:

"Air rifles and pellets should be stored separately. Likewise, if anyone has air rifles or firearms at home, all rifles and ammunition

should be inaccessible by untrained individuals and should be stored separately to prevent misuse. When storing keep the following in mind."

- **a.** "The air rifle should be unloaded and uncharged.
- **b.** The air rifle should be cleaned and oiled before storing.
- **c.** The air rifle should be stored in a temperature controlled environment with low humidity.
- **d.** The air rifle should be inspected periodically to make sure no rust is forming and is in a good condition."

Checks for understanding:

- a. Why is it important to follow air rifle safety rules even when cleaning?
- b. Why should an air rifle be stored in temperature controlled environment?
- c. Why do we only used approved oil (non-petroleum based) for air rifles?
- d. Why should air rifles and pellets be controlled and stored in separate containers?

Lesson 8 Teaching Suggestions:

• **Options for home storage:** Explain to students that many commercial options for home storage exists for air rifles and firearms like safes.



Lesson 9 - Air Riflery & Beyond

Materials Needed:

 Chairs for students to sit in or in an open area

Lesson Objectives:

The instructor will cover additional information and activities regarding shooting sports.

Classroom Application:

This lesson is designed to be completed after considerable target shooting has taken place.

Discussion:

Target shooting is a safe activity that can also lead to other related activities. In addition, firearms provide significant funding for conservation in the United States. Instructors should provide a foundation for the impact of shooting sports as well next steps related to air riflery.

Classroom Set-Up:

A classroom or the range is appropriate. No shooting will occur during this lesson.

Conducting the Lesson:

Sample Introduction: "The title of this lesson is "Air Riflery & Beyond". We have been shooting air rifles for several days. I want to highlight some of the other shooting sports related opportunities you might be interested in to build off of your experience with air riflery."

Shooting Sports & Conservation:

"Firearms not only serve as a core tool for hunting which helps manage wildlife populations, they also provide the foundation for funding for conservation in the United States."



Pittman-Robertson Act: "In 1937, an act known as the Pittman-Robertson Wildlife Restoration Act (PR) was passed. The act authorizes an excise tax on many sporting items (specifically shotguns, rifles, pistols, revolvers, ammunition, bows, arrows,

accessories, and arrow shafts) to be allocated back to states in the form of federal aid grants to accomplish conservation related work."

"The PR act has made an enormous contribution to conservation since 1937. Since the inception, the program has collected over 7 billion dollars from manufacturer excise taxes for conservation. States have kept their end of the bargain as well by matching those funds with over 1.7 billion dollars. The conservation efforts and programs that result from the Wildlife Restoration Act not only benefit game species but non-game species alike as well as increasing outdoor opportunities for everyone."

The following list includes some of the activities that are eligible for funding from the Wildlife Restoration Program.

- Restore and manage wildlife for public benefit;
- Construct, operate and maintain facilities including shooting ranges;
- Enhance programs for education, safety and development of hunters;
- Acquire, manage, and improve habitat;
- Purchase land for public hunting and wildlife conservation;
- Promote, manage, and deliver hunter education programs and facilities

The flowchart below, highlights how the legislation works using the sale of a firearm as an example (explain to students).

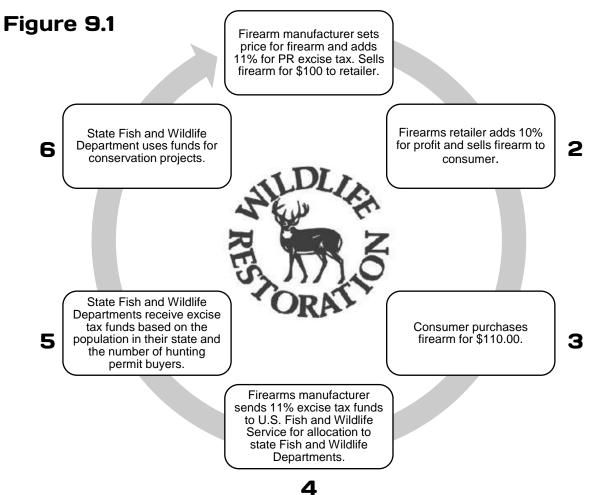


Figure 9.2: List of Items Subject to the Wildlife Restoration Excise Tax	
Equipment	Excise Tax
 Firearms (other than pistols and revolvers) (Note: air rifles are not considered firearms are not subject to the excise tax) 	11%
 Shells & cartridges (air rifle pellets are not subject to the excise tax) 	
 Firearm parts/accessories – if in knockdown/kit form and contain all components 	
 Handguns including pistols and revolvers 	10%
BowsArrows (taxed at \$0.45 per arrow shaft)	12.4%
 Archery equipment and accessories such as arrow points, rests, quivers, sights, bowstrings, stabilizers, etc. 	
 Note: Genesis bows and 1820 arrows sold through NASP® are exempt from the federal excise tax. 	

Hunting: "Hunting is the most effective wildlife management tool. No species of wildlife has ever gone extinct because of regulated hunting. In fact, mainly through permit sales, hunting provides much needed funds to provide conservation management that equates to sustainable populations of wildlife.

Most beginners start hunting with an air rifle or firearm. State fish and wildlife departments govern hunting in each state and have regulations regarding the type of animal to be hunted, when you can hunt them, how many you can harvest and the methods allowed. It is usually a requirement to purchase a hunting permit before you are allowed to hunt. Different animal types require different methods and tools. For example, to harvest a deer, a larger caliber of rifle is required. However, for a squirrel or other small game, a smaller caliber can be used like a .177 caliber air rifle with appropriate kinetic energy."

Hunter Education: "If you are interested in hunting, most states require certification in a hunter education course. In some states you can gain an exemption by hunting with someone who has hunter education certification and can serve as your mentor. In addition, states have varying requirements on ages and when you must take hunter education. Even if you don't plan to hunt, a hunter education course can provide an excellent foundation for firearms safety as well as general hunting information. Contact your state fish and wildlife department for more information about hunting and hunter education."

Shooting Sports Programming and Competitions:

"There are a number of opportunities to learn more about recreational target shooting



and even participate in target shooting competitions. Seek out local programming through shooting sports organizations. Competitions exist for air rifle in some high schools and colleges through NCAA and air rifle shooting (10 meter standing) is an Olympic discipline.

In addition, SAR coordinated tournaments are available to students."

Public and Private Shooting Ranges:

"In addition to honing your skills by attending programming, you can also practice recreational target shooting at many of the public and private shooting ranges offered around the country. Visit www.wheretoshoot.org for a listing that can be localized to your area. Many public ranges are coordinated through your state's Fish and Wildlife department and are made available because of funds from the Pittman Robertson act. These ranges are often free or charge a small fee."

Checks for understanding:

- a. How does the PR act contribute to conservation?
- **b.** Why are public and private ranges important for recreational target shooting?

Lesson 9 Teaching Suggestions:

- Flashcards for PR Act: Consider making large flash cards to show the steps of the PR legislation. Have students model each step. Consider also providing handouts to students explaining the PR act.
- Student Success: Make sure to pass on competitive opportunities to students, especially students who show an interest in target shooting competitions.

Appendix 1: BARI Training Agenda

8:30 AM	Welcome, Overview of SAR, Introduction to the BARI Guide & Target Shooting, and BARI Responsibility
9:15	Lesson 1: Target Shooting Safety & Range Set-Up
10:00	Break
10:10	Lesson 2: Equipment Nomenclature & Inspection
10:30	Lesson 3: Determining Eye Dominance
10:40	Lesson 4: 11 Steps to Air Riflery Success
11:20	BARI Coaching Techniques
11:30	Lesson 5: Taking the First Shot
12:00 PM	Lunch
12:30	Lesson 6: Target Shooting Practice
1:20	Break
1:30	BARI Practical Exercise – Teaching Lesson 5: Taking the First Shot
2:30	Lesson 7: Air Riflery Games and BARI competition
3:15	Lesson 8: Equipment Maintenance & Repair
3:45	Lesson 9: Air Riflery & Beyond
4:10	Test
5:00	Adjourn

Appendix 2: Sample Unit Overviews

One Week Lesson Plan (five, 50 minute class periods)

- **Day 1:** Target Shooting Safety & Range Set-Up and Equipment Nomenclature & Inspection
- **Day 2**: Determining Eye Dominance, 11 Steps to Air Riflery Success, and Taking the First Shot
- Day 3: Target Shooting Practice
- **Day 4:** Target Shooting Practice and Competition
- **Day 5:** Equipment Maintenance & Repair, and Air Riflery & Beyond

Two Week Lesson Plan (ten, 50 minute class periods)

- **Day 1:** Target Shooting Safety & Range Set-Up and Equipment Nomenclature & Inspection
- **Day 2:** Determining Eye Dominance and 11 Steps to Air Riflery Success
- **Day 3:** Taking the First Shot and continued target shooting from the standing position
- Day 4: Target Shooting Practice
- **Day 5:** Air Riflery Games
- **Day 6:** Equipment Maintenance & Repair and Air Riflery & Beyond
- **Day 7:** Running the range by students with instructor supervision/advisory
- **Day 8:** Air Riflery Games (continued) and Target Shooting Practice
- **Day 9:** Target Shooting Practice (competition preparation)
- Day 10: Classroom Competition

Appendix 3: SAR Range Layout

Note: Layout below is for school gymnasium; diagram not to scale

Pellet Backstop Net: (greater than 30" from hard object)		
Target Holders (less than 30" from pellet backstop net)		
Target Line: (2 yards or meters from targets)		
Door Locked and		
Signed		
Shooting Line: (10 yards or meters from target holder faces)		
Shooting Stations Rifle Rack Rifle Rack		
Waiting Line: (4 yards or more beyond Shooting Line)		
Door Locked		
and Signed		
Spectator Line: (4 yards or more beyond Waiting Line)		
Spectator Line Note: This line is preferred but optional (because of gym size). If present, safety glasses are not required to be worn behind the Spectator Line. If not present, everyone must wear safety glasses on the entire range area.		

Appendix 4: 11 Steps to Air Riflery Success, Primary Air Riflery Safety Rules, & SAR Whistle Commands

11 Steps to Air Riflery Success

- 1. Position
- 2. Charge Rifle
- 3. Load
- 4. Shoulder Rifle
- 5. Rifle Hand Set
- 6. Release Safety
- 7. Trigger Hand Set
- **8.** Aim (Sight Picture)
- 9. Shot Set-Up
- **10.**Shoot (Squeeze the Trigger)
- 11. Follow-Through, Reflect, and make Safe

Primary Air Riflery Safety Rules

- 1. Always keep the muzzle pointed in a safe direction.
- **2.** Always keep your finger outside the trigger guard until ready to shoot.
- **3.** Always positively identify your target; check both in front and behind for safety.
- **4.** Always keep your safety on until ready to shoot.

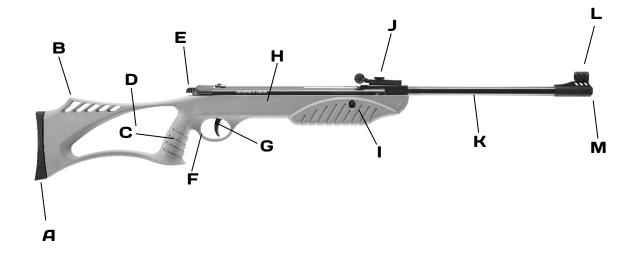
SAR Whistle Commands

1 whistle blast:	Load, shoot and follow "11 Steps to Air Riflery Success"
2 whistle blasts:	Get rifles or return rifles while pointing the rifle muzzle in a safe direction
3 whistle blasts:	Go get targets
5 or more whistle blasts:	Emergency

Appendix 5: Umarex Embark Air Rifle & Journey .177 Pellet Nomenclature

Umarex Embark Air Rifle

Recoil Pad	А	Stock	н
Comb	В	Forearm	I
Grip	С	Rear Sight	J
Thumbhole	D	Barrel	к
Safety	E	Front Sight	L
Trigger Guard	F	Muzzle	Μ
Trigger	G		

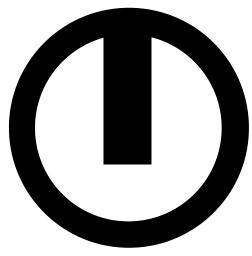


Journey .177 Pellet

Head	А
Waist	В
Skirt	С



Appendix 6: Sight Alignment & Sight Picture Tool



Front Sight

Rear Sight



Sight Alignment and Sight Picture Tool

- **1.** Print off this page on transparent paper.
- **2.** Fold the transparency in half and place a folded piece of white paper in between.
- **3.** Show and discuss both sides of the transparency with the paper in the middle (rear sight, front sight).
- **4.** Remove the white paper to show sight alignment and discuss details of front sight squarely centered in rear sight.
- **5.** Show the transparency on top of a bullseye target to show proper sight picture.

Appendix 7: SAR Parent/Guardian Letter (Sample)

Date

From Name and Address

Dear Parents and Students:

Our school currently participates in the National Archery in the Schools Program (NASP®) and we have experienced overwhelming support. This year we will also be participating in the Student Air Rifle Program (SAR).

Over the last several years, NASP® has drawn high student interest at our school. The SAR air riflery target shooting curriculum is designed to transition students from archery to air riflery in a format that is familiar to students and teachers while promoting safety, knowledge, and focus in the lifetime sport of target shooting in physical education. SAR uses universal fit, low velocity air rifles with nontoxic, lead free pellets. All instructors have been certified as Basic Air Riflery Instructors (BARI) to officially offer the structured curriculum.

We are excited to provide this opportunity to our students. All students will be instructed and must pass a written and/or practical safety test before participating in the program. Students unable to pass the proficiency test or those who wish to opt-out will be given an alternate curricular assignment. Please contact me with any questions regarding this new and exciting program. If you wish for your student to opt-out of the Student Air Rifle Program, please feel free to contact me via e-mail or phone.

Respectfully,

Name Title Contact information

Appendix 8: SAR Student Test (Sample)

After lessons 1-4 have been completed and before students are allowed to shoot, it is strongly recommended for every student to pass a written test. Depending on the level of questions asked, it is recommended for a score of 100% be obtained by each student before shooting occurs. Listed below are sample suggested questions. Other questions can be added as well.

- 1. What is the number one rule of air riflery and firearms safety?
- **2.** While participating in the air riflery curriculum for the Student Air Rifle Program (SAR), what does 1 whistle blast mean?
- **3.** If while participating in the air riflery curriculum for SAR, you hear 5 or more whistle blasts or someone yell cease fire, you should immediately?
- 4. What is the muzzle on an air rifle or firearm and where should it always be pointed?
- 5. What should you do if you see someone walk in a door behind the net backstop?
- 6. What should you do if you drop a pellet on the ground while loading your rifle?
- 7. Are you allowed to bring your own air rifle to school?

Notes

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SF PARTNERS



Together with our partners, SAR is facilitating an introduction to the lifetime sport of target shooting to school-aged youth in grades 4 through 12.

www.studentairrifleprogram.org 314-337-1727 (ISAR)

@studentairrifleprogram

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