

Acknowledgments

Scouting America greatly appreciates the National Range and Target Activities Subcommittee members for their expertise and recommendations in the development of the *National Range and Target Activities Manual*.

We would also like to acknowledge the longstanding relationship with the National Rifle Association (NRA) in the goal of training youth and adults in the safe use of firearms.

Scouting America would like to acknowledge the relationship with USA Archery for the relationship in developing and training youth and adults in safe archery experiences.

SCOUTING AMERICA'S COMMITMENT TO SAFETY

In Scouting, we will not compromise the safety of our youth, volunteers, and employees. Safety is a value that must be taught and reinforced at every opportunity. We are all responsible and must hold each other accountable to provide a safe environment for all participants.

We are committed to abuse prevention by utilizing:

- Mandatory youth protection training.
- Criminal background checks.
- Banning one-on-one adult and youth interactions.
- Mandatory reporting of suspected abuse to law enforcement.
- A volunteer screening database.

We are committed to injury and illness prevention by integrating safety measures in our handbooks, literature, and training materials including the *Guide to Safe Scouting*. We expect leaders to use the four points of **SAFE** when delivering the program. **SAFE** Scouting measures include:

- Youth are **Supervised** by qualified and trustworthy adults who set the example for safety.
- Activities are **Assessed** for risks.
- Pre-requisite **Fitness** and **skill** levels are confirmed before participation.
- Appropriate **Equipment** is utilized and **Environmental** conditions are monitored.

When incidents do occur, we expect a timely, clear, and complete incident report. We are committed to learning from the data and modifying program guidance for the prevention of future occurrence.



INTRODUCTION

The purpose of Scouting America's range and target activities is first and foremost centered around teaching firearm safety. Scouting America's range and target activities are developed and implemented through age-appropriate training and experiences. Scouting America adheres to its longstanding policy of teaching its youth and adult members the safe, responsible, and intelligent handling, care, and use of firearms, archery, and hand-held throwing sports in planned, carefully managed, and supervised programs for each youth who chooses to participate.

In addition, participating in range and target activities provides Scouts the opportunity to learn responsibility, self-discipline, problem solving, concentration, sportsmanship and acquire lifelong skills and hobby interest.

Scouting America follows the SAFE practices and requires all ranges to have Standard Operating Procedures (SOP) that are approved for that range. Range supervision and instruction are overseen by qualified staff with a key focus of Scout safety.

The Scouting America's National Range and Target Activities Subcommittee understands the need for clarification in the terminology and delivery of range and target activities. The Guide to Safe Scouting and this manual contains information for all the range and target activities and provides guidance for their implementation in Scouting. **No other range and target activities are authorized at this time.** Information on approved firearms, ranges, qualified supervision, training requirements, targets, and ammunition is included.



Scouting is SAFE – Range and Target Activities

Scouting America adheres to its longstanding policy of teaching its youth and adult members the safe, responsible, and intelligent handling, care, and use of firearms, archery and hand-held throwing sports in planned, carefully managed, and supervised programs. Safety during range and target activities must remain top of mind.

Supervision

Youth are supervised by qualified and trustworthy adults who set the example for safety. Supervision includes:

- Range Management - a range safety position(s) who oversee the shooting stations and participants. At a minimum, all Scouts BSA troops, Venturing crews, and Sea Scout ships who provide unit-level sponsored/planned range and target activities must have at least one registered unit leader 21+ years of age take the Range Activity SAFETy online training at my.Scouting. This individual must be present at the range during the activity.
- Instruction – participants with the right demeanor, skills, abilities and validated credentials to teach safety and develop the participant’s ability at that activity.
- During live fire, range safety positions and instructors may be supplemented by coaches, registered leaders, and even parents and partners to support a safe experience for participants.
- Cub Scout range and target activities are only conducted and supervised by local Councils. Cub Scout pack unit level sponsored range and target activities are prohibited.

Assessment

Activities are assessed for risks during planning. Leaders have reviewed applicable program guidance or standards and have verified the activity is not prohibited. Risk avoidance or mitigation is incorporated into the activity. Assessment includes:

- Validating the range and target activities are age-appropriate for the participants being served. Please review the Guide to Safe Scouting Age-Appropriate Guidelines Chart prior to beginning the activity.
- When utilizing council’s nationally authorized camp property’s range(s) or commercial ranges, standard operating procedures for each venue are available, fitting the discipline, equipment and ammunition being used.
- Verification of state and local laws regarding range and target activities are followed.

Fitness and Skill

Participants’ Annual Health and Medical Records are reviewed, and leaders have confirmed that prerequisite fitness and skill levels exist for participants to take part safely. This includes:

- An instructor reviewing participant’s ability (with or without accommodations) to safely operate the device, firearm, or bow, or throwing object.
- Participants have received the appropriate on-site safety briefing before participation including the three rules of firearm safety.

Equipment and Environment

Safe and appropriately sized equipment, courses, camps, campsites, trails, or playing fields are used correctly. Leaders periodically check gear use and the environment for changing conditions that could affect safety. This includes:

- Before any use, and periodically, all equipment (shooting devices, firearms, bows, slingshots, hawks, knives, target frames or targets, etc.) should be inspected by a range supervision and instruction and qualified gunsmiths or archery retailer.
- Safe and secure storage and transportation for firearms, ammunition, bows, etc.
- Personal Protective Equipment for all participants and observers is available and used as required. Including:
 - Eye protection
 - Hearing protection
 - Armguards
 - Finger Tabs or finger savers
 - Appropriate attire

CONTENTS

Section I The Essentials

Chapter 1: Qualified Supervision—Roles and Responsibilities	7
Introduction to Range and Target Activities and the Positive Aspects	7
Range and Target Activities Personnel Descriptions	7
Definition of “Instructor Qualified”	8
Five Levels of Shooting Activities	13
Chapter 2: Range and Target Activities—A Wealth of Year-Round Opportunities	19
Cub Scout Programs	19
Scouts BSA Programs	19
Venturing and Sea Scout Programs	19
Chapter 3: Merit Badge Counselors	21
Range and Target Activities Merit Badge Counselor Requirements and Registration	21
Resources for Merit Badge Counselors	21

Section II Beyond the Unit Level

Chapter 4: Council Range and Target Activities Committee	25
Organization	25
Responsibilities	25
Directing Cub Scout Range and Target Activities in a Council Program	26
Safety Instruction Guidelines	26
Positive Aspects of Range and Target Activities	26
Chapter 5: Range Operation	27
General Equipment Common to All Scouting Program Levels and Shooting Disciplines	27
Range and Shooting Equipment Appropriate to Each Scouting Program Level	28

Section III Health and Safety

Chapter 6: Safety	35
Communications	35
Emergency Response Plans	35
National Camping Standards	35
Standard Operating Procedures	35
Equipment Inspections—Firearms and Archery	35
Chapter 7: Additional Considerations	35
General	35

Section IV Training

Chapter 8: Training Courses	39
Scouting America Training	39
National Rifle Association Training	39
Archery Training	40

Section V Range and Target Activities for Cub Scouts

Chapter 9: Introduction	45
Leadership	45

Section VI Other Range and Target Activities for All Program Levels

Chapter 10: Other Range and Target Activities for All Program Levels	67
Safe Ranges	67
Pellet Rifles	67
Slingshots and Wrist-Braced Slingshots	67
Catapults and Other Shooting Devices	69
Sporting Arrows and Flash Ball	69
Tomahawk and Knife Throwing	70
Chapter 11: Resources, Certificates, and Patches	75
Resources	75
Sample Archery Scorecard	77
Sample Targets	78
Crossword Puzzle: Air Gun	79
Quiver and Bow Rack	80
Archery Storage Locker	81
Glossary	85

Appendices

1	NRA FIRST Steps Scouts BSA Shotgun Shooting Merit Badge Teaching Guide	91
2	NRA FIRST Steps Scouts BSA Rifle Shooting Merit Badge Teaching Guide	125
3	Sample Standard Operating Procedures Manual	157
4	Range and Target Activities Decision Tree	161
5	Cub Scout BB Gun Range and Target Activities	163
	Training Archery Rangemasters	165
	Training BB Gun Rangemasters	166
6	Prohibited Activities	167
7	Open Shooting Archery Experience	169
8	Instructional Archery Experience	173
9	Pistol Shooting	177
10	Multigun Airsoft Experience	180
11	Chalk Ball Program Guide	191
12	Cowboy Action Program Guide	197
13	Instructional Rifle Experience	204
14	Open Rifle Experience	208
15	Instructional Shotgun Experience	212
16	Open Shotgun Experience	216
17	Sporting Arrows	220
18	Cub Scout Range and Target Activities Adventure Lesson Plans	221
19	Resources	259

CHAPTER 1: QUALIFIED SUPERVISION—ROLES AND RESPONSIBILITIES

Introduction to Range and Target Activities and the Positive Aspects

Throughout Scouting America from Cub Scouting to Venturing and Sea Scouting, all programs use responsible outdoor activities to promote character development and values-based leadership training. Range and target activities have the ability to attract and retain youth in the movement. Millions of young people participate in one or more of the sports annually—archery, rifle and shotgun activities, etc.—guided by adults who have the certification, skills and knowledge to provide quality programs in a safe and effective way.

Key to safe and effective unit activities is informed, trained, and conscientious unit leadership. Various activities can present some degree of risk; those risks can be mitigated by training and commitment of Scouting volunteer leaders. When activities are properly conducted under the appropriate guidelines, they can be safe, fun filled, exciting, and rewarding.

The registered adult leader(s) in charge are always responsible for ensuring that all activities adhere to the age appropriate guidelines and follow the program design of Scouting America. However, Scouting America policy does not specify that the unit leader must be the one to satisfy all the criteria for supervision of specific program activities. All Scouts BSA troops, Venturing crews, and Sea Scout ships who provide unit-level sponsored/planned range and target activities must have at least one registered unit leader 21+ years of age take the Range Activity SAFETY online training available on my.Scouting.org. This individual must be present at the range during the range and target activity(s). Participating in this training will help ensure a unit understands Scouting America's range and target activities policies.

For range and target activities, the unit leader may or may not hold specified certification(s) for the supervision of the range and in the case of Cub Scouting, range and target activities are not approved for a unit activity.

There are two main aspects of range supervision:

1. **Range Management** – Those individuals who are in charge of range safety and overseeing the shooting stations and participants. These people are responsible for following the approved Standard Operating Procedures (SOP) for the range and overall range supervision. This person is the safety officer.
2. **Range Instruction** – Those individuals whose primary concern is instruction in the type of shooting, referred to as a shooting discipline. This person is responsible to train in the proper use of and care for the equipment being used. This person may instruct advancement or recognition pieces. Their main responsibility is to instruct and foster competency in the participant.

This publication provides guidance on how to ensure proper safeguards are in place for a range and target activity, whether those safeguards are implemented by the facility operator or the unit. Skills and certifications are reviewed, as well as requirements for a proper facility. After reviewing this material, the leader should be confident in their ability to judge when a range and target activity is safe, when the risk is unacceptable, or when their background is insufficient to make that determination. Experienced, informed leaders develop a sense or intuition regarding an action. When an activity exceeds the leader's comfort zone, it should be curtailed or modified.

Range and Target Activities Personnel Descriptions

Beginning September 1, 2024, the position previously titled "Shooting Sports Director" will be renamed "Range Activities Director." Individuals holding a valid certificate from the Shooting Sports Director section of the National Camping School retain their certification until it expires. Expiration dates are indicated on an individual's official National Camping School certificate card. In this manual, the title "Range Activities Director" may also refer to those previously certified as "Shooting Sports Directors," provided their certification remains valid.

Range Activities Director

- Twenty-one years of age or older and currently certified with a valid certificate of training from the Range Activities Director or Shooting Sports Director section of National Camping School within the past five years.
- In charge of all range and target activities, including rifle, shotgun, muzzleloaders, throwing sports and archery during camp program.
- Manages staff that includes properly qualified instructors with current certifications and trains support staff.
- Sees that all areas are maintained and used properly, keeps an updated inventory of equipment, and is in charge of the safe and proper maintenance and use of this equipment.
- Can serve as a Range Safety Officer if the National Camping School certified Range Activities Director holds current NRA Range Safety Officer Certification.
- Can serve as an NRA Instructor if the National Camping School Range Activities Director holds current NRA Instructor certifications for the discipline for which supervision and instruction is required.

NRA Certified Instructor

- Twenty-one years of age or older. Current NRA Instructor rating in the specific program for which supervision and instruction is required. The National Camping School Range Activities Director can be the NRA Instructor.

NRA Assistant Instructors

- Eighteen years of age or older and holds current NRA assistant instructor's certificate in the appropriate discipline
- Can assist the NRA Instructor in supervising a range; however, this does not include running a live firing line.

NRA Range Safety Officer

- Twenty-one years of age or older and holds current NRA Range Safety Officer credentials
- In charge of the firing line at any time it is in operation
- May not leave the firing line at any time while it is in operation

Range and Target Activities Program Counselors and Aides

- Sixteen years of age or older and trained for specific duties by a National Camping School Range Activities Director
- Under on-site supervision of an NRA Range Safety Officer, may exercise crowd control, serve as training assistant for specified topics assigned by the NRA Range Safety Officer, move and maintain equipment, and act as a coach in a student coach/pupil setting
- May NOT supervise any live fire

Scouting America BB Gun Rangemaster

- Eighteen years of age or older and trained by a National Camping School Range Activities Director or National Rifle Association rifle instructor
- Is in charge of the firing line at any time it is in operation
- BB gun rangemaster training must be renewed every two years, and this person must have a current Training Course Certificate, No. 33767

Scouting America Archery Director

- 18 years of age or older
- An Archery Rangemaster who is trained by a National Camping School Range Activities Director or is instructor certified by the USA Archery using USA Archery Level 1 instructor course by a USA Archery Level 2 Instructor Trainer or a National Camping School Range Activities Director or a USA Level 1 Archery Instructor and would receive a Rangemaster certification.

- Responsibilities include the setup and operation of a safe archery range for Cub Scout, Scouts BSA, Venturing or Sea Scouting programs, Archery merit badge instruction, and management of an archery staff at camp.

Scouting America Archery Rangemaster

- Eighteen years of age or older and trained by a National Camping School Range Activities Director or USA Archery Level 1 Archery Instructor to set up and operate a safe archery range for a Cub Scouts, Scouts BSA, Venturing or Sea Scouting archery program according to the standards located in this manual, "Archery and BB Guns."
- Archery rangemaster training must be renewed every two years, and this person must have a current Training Course Certificate, No. 33767.

Council Range and Target Activities Coordinator/Chair

- 21 years old or older. National Camping School certification as a Range Activities Director is recommended.
- National Rifle Association certified instructor for one or more of the appropriate disciplines is recommended.
- Current NRA Range Safety Officer or NRA Chief Range Safety Officer certification is recommended.
- USA Archery Level 1 Archery Instructor certification recommended.

Definition of "Instructor Qualified"

To be instructor qualified means the individual holds one or more of the following certifications depending on the discipline.

Trained and currently documented by:

- Scouting America National Camping School as a Range Activities Director for rifle, shotgun, co-op muzzleloading rifle, and archery.
- The National Rifle Association as a currently certified instructor for the specific discipline where instruction is taking place (rifle, shotgun, pistol, co-op muzzleloading rifle, or NRA/NMLRA muzzleloading instructor)
- USA Archery as a currently certified USA Archery Level 1 instructor or higher.

A copy of the current training certificate or document is to be on file at the local council office and/or camp.

The following Chart describes the disciplines for Scouting programs, and the supervision required to operate these programs. All range and target activities must follow the guidelines of the Guide to Safe Scouting and the age appropriate guidelines of Scouting America.

Program	Participants	Safety equipment	Minimum program supervision requirements	Qualified staff to open the range	Minimum number of staff to operate	Ratio instructor : participant	Additional information
BB (Scouting America Accredited Camp)*	All program levels <i>except</i> Lion Cub Scouts	Eye Protection	BB gun Rangemaster	BB Gun Rangemaster National Camping School Range Activities Director NRA Rifle Instructor Certified Military shooting instructor** Certified Law Enforcement Shooting Instructor** Certified 4-H Shooting Instructor**	1 qualified staff and appropriate assistants	1:1 adult to participant for Tiger Cubs 1:8 all others	Cub Scout participation at District or Council events Only
BB (Unit Activity)	Scouts BSA, Venturing, Sea Scouting	Eye protection	BB gun Rangemaster	BB Gun Rangemaster National Camping School shooting Sports Director NRA Rifle Instructor	1 qualified staff and appropriate assistants	1:8	Not approved as a Cub Scout unit activity
Slingshot (Scouting America Accredited Camp)*	All program levels	Eye Protection	BB gun Rangemaster	BB Gun Rangemaster National Camping School Range Activities Director NRA Rifle Instructor Certified Military shooting instructor** Certified Law Enforcement Shooting Instructor** Certified 4-H Shooting Instructor**	1 qualified staff and appropriate assistants	1:1 adult to participant for Cub Scout (all levels) 1:4 adult to participant Scouts BSA, Venturing, Sea Scouting	Cub Scout participation at District or Council events Only
Slingshot (Unit Activity)	Scouts BSA, Venturing, Sea Scouting	Eye Protection	BB gun Rangemaster	BB Gun Rangemaster National Camping School Range Activities Director NRA Rifle Instructor	1 qualified staff and appropriate assistants	1:4 adult to participant	Not approved as a Cub Scout unit activity
Pellet Rifles	Scouts BSA, Venturing, Sea Scouting, Webelos and Arrow of Light Scouts (Long-term camp only)	Eye Protection	NRA Rifle Instructor	National Camping School Range Activities Director NRA Rifle Instructor Certified Military shooting instructor** Certified Law Enforcement Shooting Instructor** Certified 4-H Shooting Instructor**	1 qualified staff and appropriate assistants	1:8	Webelos Scouts and Arrow of Light Scouts may use pellet rifles on a council operated range while attending a long-term camp. All pellet rifles (CO2, pump, break barrel, etc.) are limited to singleshoot, designated for target shooting, velocity of 500 to 540 feet per second, with a minimum of 2.5 pound trigger pull. See also Multigun Airsoft Experience Operations Guide in appendix for additional operational guidance.

*Scouting America accredited camp means, Day Camp, Short-term Camp and Long-term camp following the NCAP standards. If a council or district has a day activity, standards for “unit activity” apply. Unless otherwise stated the supervision standard is the same for a camp or unit activity. | **Requires approved waiver. In addition, if these positions are used, these individuals need to also be familiar with and follow the program outlined in the Cub Scout Range and Target Activities Guide located in chapter 23 of this manual. | † Required waiver for long-term camp only

Program	Participants	Safety equipment	Minimum program supervision requirements	Qualified staff to open the range	Minimum number of staff to operate	Ratio instructor : participant	Additional information
Archery (Scouting America Accredited Camp)	All program levels	Arm guards on bow arm, finger protection	Archery Rangemaster	Archery Rangemaster for Cub Scout; OR USA Archery Level 1	1 qualified staff and appropriate assistants	1:8	
Archery (unit activity)	Scouts BSA, Venturing, Sea Scouting	Arm guards on bow arm, finger protection	USA Archery Level 1 or higher	USA Archery Level 1 or higher	1 qualified staff and appropriate assistants	1:8	
Tomahawks/ knives	Scouts BSA, Venturing, Sea Scouting	Eye protection	Responsible adult (18+) familiar with the use of tomahawk/knife throwing	Responsible adult (18+) familiar with the use of tomahawk/knife throwing	1 qualified staff and appropriate assistants	1:4	Activity must be approved by a council Range and Target Activities committee chair or National Camping School Range Activities Director.
Catapults (see catapults in chapter 10)	All program levels (as appropriate)	Eye protection	NRA Range Safety Officer				Activity must be approved by council range and target activities chair or National Camping School Range Activities Director.
Chalkball/ Paintball (Scouting America accredited Camp programs only)	Scouts BSA, Venturing, Sea Scouting	Eye and hearing protection	NRA Range Safety Officer	NRA RSO	1 qualified staff and appropriate assistants	1:1	See also Chalkball Shooting Program Guide, in the appendix. Council must apply to operate this activity.
Multi-gun Airsoft experience	Scouts BSA, Venturing, Sea Scouting	Eye Protection	BB Gun Rangemaster with Airsoft endorsement Coach (authorized by airsoft instructor) Volunteer (as needed for event)	BB Gun Rangemaster with Air Soft endorsement National Camping School Range Activities Director NRA Rifle Instructor with Airsoft endorsement	2 qualified staff and appropriate assistants	1:1 1 Instructor per bay 1 Coach per bay	See also Multi-gun Airsoft Experience Operations Guide, in the appendix. Airsoft endorsement is conducted through the council Range and Target Activities committee. Council must apply to operate this activity.
Sporting arrows (Scouting America accredited Camp programs only)	Scouts BSA, Venturing, Sea Scouting	Arm guards on bow arm, finger protection	USA Archery Level 1 or higher instructor	USA Archery Level 1 or higher instructor	1 qualified staff and appropriate assistants	1:3	See also Sporting arrows Shooting Program Guide, Appendix 19, page 251. Council must apply to operate this activity

CHAPTER 2: SCOUTING AMERICA RANGE AND TARGET ACTIVITIES — A WEALTH OF YEAR-ROUND OPPORTUNITIES

CUB SCOUT PROGRAMS

Cub Scout range and target activities programs may be conducted only on a district or council level. Archery, slingshot and BB gun shooting are restricted to day camps, Cub Scout/Webelos Scout long-term camps, council-managed short-term camps, or to council or district sponsored activities where there are properly trained supervisors and all standards for Scouting America range and target activities are enforced. Archery, slingshot and BB gun shooting are prohibited at the pack level.

The use of pellet air rifles is restricted to Webelos Scouts and Arrow of Light Scouts in a long-term camp setting only.

SCOUTS BSA, VENTURING AND SEA SCOUT PROGRAMS

Firearm programs may only take place on a nationally authorized camp property's range(s) or at a commercial firearm range. This does not apply to district or council programs that utilize BB devices, but applies to pellet rifles, airsoft (any type), rifles, pistols, shotguns, and muzzle loading rifles and shotguns. Some states, counties, or other jurisdictions may regulate BB guns as firearms depending on their design and capabilities. Councils must review and follow any local regulations before conducting programs.

The council's camp may be an ideal location for range and target activities. Here, safely designed ranges may be established for the long-term camping program. Under qualified leadership, Scouts, should be given a chance to participate in these skills year-round. Alert unit, district, and council leadership will discover community resources that will be available to units throughout the year. Local archery, National Rifle Association, and sportsmen's groups will often provide facilities and resources.

Scouts BSA, Venturing and Sea Scout members can shoot small-bore rifle, shotgun, muzzleloading rifle, muzzleloading shotguns, and archery following the five levels of shooting described in the chart in Chapter 1.

Scouts BSA members who are 14 years of age or older, or are 13 years of age and have completed the eighth grade, Venturing and Sea Scout members may participate in the NRA FIRST Steps Pistol Orientation sponsored by their council or district. No other pistol program is allowed, except for potential participation in approved council cowboy action programs. Pistol use is limited to pistols and revolvers as follows: .177 pellet pistol; .22 long rifle rimfire; .38 caliber special; or 9 mm only.

For information about the Scouts BSA Merit badge programs refer to the following publications:

- Rifle Shooting merit badge pamphlet, No. 35942
- Shotgun Shooting merit badge pamphlet, No. 35948.
- Archery merit badge pamphlet, No. 35856.

Long-term and Short-term camp programs. Scouting America camp programs offer a wide variety of range and target activities opportunities for Scouts. Each local council will serve as a resource for more information on what that council's camp offers.

Hunter education (Scouts BSA/Venturing and Sea Scouting). Contact your local department of natural resources for more information on hunter safety and education, or find information online at www.hunter-ed.com (Hunting programs are only approved for Venturing and Sea Scouting).

Venturing Range and Target Activities Outstanding Achievement Award. While working on the Ranger Range and Target Activities elective, Venturers and Sea Scouts are to complete one of the following disciplines: pellet pistol, air rifle, archery, muzzleloading rifle, shotgun, or small-bore rifle. However, Venturers and Sea Scouts who go beyond the basic requirement and complete five of the seven disciplines will earn the Venturing Range and Target Activities Outstanding Achievement Award. This medal and certificate are sponsored by many companies and organizations to recognize outstanding achievement in shooting sports.

For more information, go to <https://www.scouting.org/awards/awards-central/venturing-shooting/>

CHAPTER 5: RANGE OPERATION

In planning any range and target activities, consideration must be given to what equipment is required for that specific shooting discipline and venue. Care must be taken to provide, or arrange for, the safety of non-participants as well as personal protection of the participant. This chapter examines some of the items that should be considered.

The use of personal firearms and personal ammunition is prohibited in all Scouting programs at a camp property (see Standard SA-001). Personal firearms and personal ammunition may be used at a commercial firearm range, subject to restrictions regarding caliber, gauge, and action as described in this manual.

General Equipment Common to All Scouting Program Levels and Range Disciplines

Range safety flag. As an indicator that the range is active, the range safety flag is to be displayed on a flagpole in a prominent place visible to approaching spectators and participants. Each range should have its own flagpole. It is recommended the flag be made of a bright red material approximately 48-by-36 inches in size. (This flag can be purchased from the NRA's online store.) The flag should be removed at the end of the shooting session.

Eye and hearing protection. Each participant must wear hearing and eye protection appropriate for the shooting discipline. Spectators in the immediate, designated area must also wear protection as appropriate. ANSI Z87.1 is the approved rating and the industry standard. Shooting sports safety glasses with this rating should be worn anytime safety glasses are prescribed.

This personal safety equipment may be provided by the event or furnished by the individual participant. If provided by the individual, the Range Safety Officer or NRA instructor should verify that eyeglasses have adequate lens area to offer protection. Hearing protection must fit properly.

If eye and hearing protection is furnished by the event organizers, an assortment of sizes should be on hand to ensure proper fit. Youth sizes are available from many vendors of safety glasses. Earmuffs might be preferable to earplugs. When exchanging common-use items, be sure to clean and disinfect them before wearing them. Earplugs are NOT to be exchanged.

Empty-chamber indicator. An added safety measure while transporting or storing, or while the firearm is, UNLOADED AND NOT BEING USED ON THE FIRING LINE a visual empty-chamber indicator should be installed. Several commercial models are available which when installed in the chamber displays a brightly colored flag readily visible.

A simple alternate method is to use a piece of high-visibility, heavy monofilament trimmer line, cut approximately 12 inches longer than the barrel of the firearm. When inserted through the barrel, approximately 6 inches of line is visible at both the muzzle and the breech.

Ammunition control. A simple ammunition block, with an appropriate number of 15/64-inch-diameter holes drilled in a pattern of a multiple of five, should be used to control the ammunition being dispensed to the participants. Range personnel will load the blocks from the bulk ammunition storage, and issue only the number of rounds being fired for a given relay. If magazines are being used, range personnel will load magazine prior to distribution.

Comfort items.

- Sling. A leather or web sling will aid participants in the prone, kneeling, and sitting positions. They are easily adjustable to each participant and will steady the participant.
- Prone mat. A padded shooting mat of approximately 30-by-60 inches should be provided at each prone shooting position.
- Kneeling roll. A piece of carpet remnant approximately 8 inches wide and tightly rolled and bound to approximately 4 to 6 inches in diameter may be placed under the ankle of the down leg when shooting in the kneeling position.

First-aid kit. A first-aid kit must be readily accessible to the range or classroom. It should be well stocked and include items appropriate for potential injuries unique to the specific range and target activities venue. A medical log must be included in each kit. Details of each incident should be recorded. Any injury requiring first aid of any kind must be recorded in the First Aid Log for camp if the activity is a part of a Council long term, short term or day camp and if required, submit an incident report. Expended materials should be replaced before the next activity. Contents should be monitored and replaced as needed.

Emergency communications device. The procedure to summon emergency help must be considered during planning and be verified before the start of the event. The details of the exact location should also be noted in the event of an emergency. All range personnel should be familiar with the emergency procedures of the event and understand how to reach help.

Range Equipment Appropriate to Each Scouting Program Level

NOTE: The Cub Scout range and target activities programs are authorized for District and Council events only and are not approved for use at the unit level. For approved shooting activities for each age level, refer to the age appropriate guidelines within the *Guide to Safe Scouting*.

BB Gun

BB Gun. Only a smoothbore, spring-type air gun propelling a coated steel ball projectile commonly known as a “BB” may be used.

Target. The target line is usually 16.5 feet from the firing line. The TQ-40 and AR-4 are the common targets for this distance. Paper plates or aluminum pie tins are also popular targets for Cub Scouts and training new shooters. Animal, zombie, and human form silhouettes are not approved for Cub Scout use. Appropriate animal silhouettes including wild game species normally hunted are appropriate for Scouts BSA, Venturers, or Sea Scout use. Zombie and human form silhouettes are not approved for use in any Scouting America range and target activities programs.

Personal Protection. All participants must wear eye protection.

Pellet Rifle

Pellet Rifle. Spring, piston or pneumatic (single stroke, multi-pump, air, or CO2 gas) pellet rifles with rifled barrels bored for .177-caliber skirted pellets may be used. Pellet rifles (CO2, pump, break barrel, etc.) are limited to single-shot, designed for target shooting with a look comparable to approved .22 rifles. Rifles may be used by Webelos Scouts, Arrow of Light Scouts, Scouts BSA, Venturers and Sea Scouts. Webelos and Arrow of Light use is restricted to long-term camps only.

- The pellet rifle range meets or exceeds Scouting America and NRA recommendations and appropriate Scouting America Outdoor Programs/Properties design standards.
- All pellet rifles in good repair are provided. All pellet rifles used in Scouting America range and target activities have a trigger pull in excess of 2.5 pounds and are tested with a 2.5-pound weight or scale at least once a week while in use. If any trigger mechanism fails, the pellet rifle is immediately removed from service. Documentation of the tests is maintained.
- **Webelos and Arrow of Light Scouts Only:** All pellet rifles (CO2, pump, break barrel, etc.) are limited to single-shot designated for target shooting, velocity of 500 to 540 feet per second, and energy levels not to exceed 7.5 joules.

- Pellet rifle propellant is limited to CO2 cylinders or air compressor/scuba tanks. Refilling is conducted by qualified/trained adults with appropriate controls. If scuba tanks are used, each tank must be visually inspected annually and hydrostatically tested every five years by a qualified technician. Scuba tanks used for range and target activities purposes may not be used for scuba purposes.

Pellet Rifle Target. The target line is usually set at 33 feet from the firing line. The TQ-18 and AR-5 are the common targets for this distance. Paper plates or aluminum pie tins are also popular targets for training new shooters. Animal, zombie, and human form silhouettes are not approved for Webelos or Arrow of Light Scout use. Appropriate animal silhouettes including wild game species normally hunted are appropriate for Scouts BSA, Venturers, or Sea Scout use. Zombie and human form silhouettes are not approved use in any Scouting America range and target activities programs.

Personal Protection. All participants must wear eye protection.

Rifle

Rifle.

Scouts BSA, Venturing and Sea Scouts. May only use .22 caliber breech-loading, single-shot or a repeater type bolt-action rifles with a box-style magazine. (Only .22 caliber Short, long, long rifle may be used.) (Rifle tubular magazines are not allowed.) *Note: Tubular magazines may be used in approved Cowboy action programs only following the guidelines in the Cowboy action guide in the appendix of this manual. Councils must be approved by the National Council to offer Cowboy action programs using the NCAP Intent to Operate form each year.

Ammunition. Current-manufacture cartridges appropriate for the caliber firearm being used. **Reloading and use of reloaded ammunition is not approved for BSA programs. Tracer, armor-piercing and exploding ammo are not allowed.**

Sights.

- Open sights found on most rifles are limited to elevation adjustment.
- Aperture (peep) sights are fully adjustable and have an easy-to-learn sight picture. The easy adjustment will aid in qualification shooting.
- Optical (red dot, telescopic) sights are also fully adjustable.

Targets. TQ-1, TQ-5, and A-17 targets are recommended at 50 feet. The A-23 is a popular small-bore rifle target at 50 yards and the A-25 is sized for 100 yards. Scouts BSA, Venturers, and Sea Scouts are allowed to use tasteful and appropriate animal silhouette targets (paper and 3-D targets) with all firearms approved for their use. Appropriate animal silhouettes

include wild game species that are normally hunted. Human form and zombie silhouette targets are not approved for use. Metallic silhouette animal targets are also approved for use.

Exploding targets are NOT approved for ANY shooting activity.

Personal Protection. All participants must wear eye and hearing protection.

Shotgun

Shotgun. Modern, age-appropriate, target shotgun models, 12-, 16- or 20-gauge, may be used. Experience shows that beginning shotgun participants are more successful with a 20- or 12-gauge shotgun, putting more shot to the target.

Chokes. At the muzzle end of the shotgun is a “choke.” Just as the nozzle of a garden hose determines the width of a jet of water, the choke affects the spread pattern of the pellets exiting from the barrel. There are four main chokes: skeet, IC (improved cylinder), M (modified), and F (full). For camp use, skeet and IC are recommended. If these are not available, modified would be the best choice.

Ammunition. Current-manufacture shotshells of the appropriate gauge contain No. 7½ to No. 9 shot. A shot size larger than 7½ is not to be used. **Reloads may not be used in Scouting America range and target activities programs.**

Trap/thrower. Hand throwers, manual traps, or automatic traps may be used. Care should be taken to match the target speed and flight path to the shooter’s ability. Always refer to the manufacturer’s operations and safety instructions before operating this equipment.

Trap location. For new shooters and merit badge qualification, the trap should present a straight-away, rising target, at a reasonable speed. Trap systems on trap and skeet fields and on sporting clays courses will provide the participant with some challenging presentations as skills are mastered.

Personal Protection. All participants must wear eye and hearing protection.

Muzzleloading Firearms

Because of the historical significance of muzzleloading firearms, Scouts BSA members, Venturers, and Sea Scouts are encouraged to learn to safely load and shoot a muzzleloader. On the range, each participant must be under the direct supervision (one-on-one) of a currently certified NRA or NRA/NMLRA muzzleloading instructor (for the appropriate discipline) when loading or firing the muzzleloader.

Scouts BSA, Venturing and Sea Scouts. May only use muzzleloading rifles or muzzleloading shotguns. (No muzzleloading handguns are permitted in the Scouting America program.)

Muzzleloading rifles. Recently manufactured (or assembled from a kit) percussion cap muzzleloading rifles or inline muzzleloading rifles of any caliber may be used. All muzzleloading rifles are subject to safety inspection by the instructor or range officer. Rifles made from kits must be checked by a qualified gunsmith.

Propellant. Only a commercially manufactured, sporting-grade black powder or black powder substitute offered for sale by a reputable firm should be used in muzzleloading firearms. For new shooters, the amount of propellant in grains should be at the minimum of the gun manufacturer’s recommended load range.

Accessories.

- **Ramrod.** The ramrod is used to seat the patch and shot. It is usually mounted in the fore-end of the stock, just beneath the barrel. It is recommended that a more durable work rod be obtained for use on the range. The first time a new rod is used, it should be inserted into the empty barrel all the way down. A permanent mark should be scribed on the rod at the end of the muzzle. Then the same procedure should be used after a standard charge (powder, patch, and ball) has been placed in the barrel. This will enable the shooter to know whether the barrel is empty or has a standard charge.
- **Powder flask and powder measure.** Propellant shall be transferred from the original bulk container to a brass or plastic powder flask to be taken to the range. It shall then be poured into the powder measure before pouring into the barrel.
- **Shot starter.** (ml rifle) This tool allows the shooter to first get the ball and patch just started into the muzzle, and second to drive the ball a short distance down the barrel, before using the ramrod to seat the patch and ball against the powder charge.
- **Shot measure.** (ml shotgun) A small cup with a handle that allows the shooter to measure the exact amount of shot and then pour it directly into the barrel.
- **Nipple wrench and nipple pick.** The nipple wrench is simple tool used to remove the cap nipple should it become fouled. A nipple pick is a stiff wire that is used to clear debris in the nipple orifice (flash channel).
- **Capper.** Percussion caps are packaged 100 per tin. The capper allows the caps to be dispensed one at a time right onto the nipple.
- **Patch puller, ball puller.** These tools fit onto the end of the ramrod to remove the ball or patch from down in the barrel. Care must be taken when using these items.

- **CO₂ ball discharger.** This tool has a fitting to fit onto the nipple and has a small CO₂ cartridge to provide pressure to blow a patch and ball out of the muzzle of the gun. **Always point the muzzle-loader in a safe direction when using this device.**
- **Loading bench.** Many Scout ranges are equipped with a loading bench that provides a stable and easy-to-reach platform for the muzzleloading firearm during the loading process.

Personal Protection. All participants must wear eye and hearing protection.

Pistols

Scouts BSA members who are 14 years of age or older, or are 13 years of age and have completed the eighth grade, Venturing and Sea Scouts may participate in the NRA FIRST Steps Pistol Orientation sponsored by the district or council. No other pistol program is allowed, except for potential participation in approved council cowboy action programs. No unit level sponsored pistol program is approved in any Scout America programs.

Handguns of any type are NOT permitted for Cub Scouting.

Pistols and Revolvers. Pistol use is limited to pistols and revolvers as follows: .177 pellet pistol; .22 long rifle rimfire; .38 caliber special; or 9 mm only.

Sights. Open sights may be fixed or adjustable. Optical sights (red dot and telescopic) sights are also fully adjustable, but care must be taken to provide an appropriate scope for the shooting distance. Laser sights have become extremely popular as a training aid for pistol shooting; however, they may not be permitted for certain qualification programs.

Targets. A 9-inch paper plate is recommended for training new shooters at 15 feet. The TQ-6, slow-fire, and TQ-7 rapid-fire targets are recommended at 25 feet. B-2, slow-fire, and B-3, timed and rapid-fire are popular pistol targets at 50 feet. The B-16, slow-fire, and B-8, timed and rapid-fire, targets are sized for 25 yards. Appropriate animal silhouettes include wild game species that are normally hunted. Human form and zombie silhouette targets are not approved for use. Metallic silhouette is becoming a popular target discipline at many clubs and ranges. **NO exploding targets are allowed in any Scouting America program.**

Personal Protection. All participants must wear eye and hearing protection.

Pointing any type of firearm or simulated firearm at any individual is unauthorized. Units with council approval may participate in formally organized historical reenactment events where firearms are used and intentionally aimed over the heads of reenactment participants. Leaders and the council approvers for participation must complete the SAFE Checklist during planning for attendance or participation.

Archery

Bows.

Cub Scouts. A light-draw-weight (15- to 20-pound), 54-inch, take-down, recurve bow is recommended because the bow will fit many archers who have different lengths of draw.

Scouts BSA. A light-draw-weight (20- to 25-pound), 62-inch or 66-inch, take-down, recurve bow is recommended because the bow will fit many archers who may have different lengths of draw.

Venturers and Sea Scouts. A light-draw-weight (20- to 35-pound), 62-, 66-, or 70-inch, take-down, recurve bow is recommended because the bow will fit many archers who may have different lengths of draw.

All bows should be equipped with an arrow rest in good condition and with a proper-length, well-served, 10- to 12-strand string with properly placed nock locator.

Always inspect the bow for cracks and splinters, and the condition of the bowstring and serving.

A universal draw length bow is popular in youth programs because it provides all the advantages of a compound bow but with an adjustable draw weight to accommodate participants of all abilities.

True compound bows are not recommended at this level because they must be set up to fit each individual archer.

Arrows. Care should be taken to inspect arrows before use.

- **Shaft material.** Wood arrows are light but susceptible to warping and splintering. Fiberglass arrows are heavier, and more durable, and will last several seasons. Aluminum arrows are light and shoot true, but cannot be repaired if bent or kinked. Carbon fiber arrows are lighter, stronger, and preferred by most competitive shooters.
- **Length.** An appropriate length arrow for Cub Scout age youth will be approximately 24 to 26 inches. For Scouts BSA use will be approximately

26 to 30 inches. For Venturers and Sea Scout use, arrows will be approximately 28 to 32 inches. Care must be taken to avoid shooting an arrow that is too short for the archer or too short for the bow.

- **Point.** Arrows must be fitted with target points. No field points or broadheads.
- **Nock.** The nock should fit the serving of the bow being used. The arrow should not fall from the string if the nock opening is correct.
- **Fletching/vanes.** Either may be used; however, plastic vanes provide longer service with young participants.

Personal protection.

- **Quiver.** For each archer, either a personal side quiver or a ground quiver must be provided to store arrows during shooting.
- **Finger protection.** Archers must wear a finger tab or glove unless there are “no gloves” on the string.
- **Arm protection.** Each archer **must** wear an arm guard on the bow arm. Arm guards may be obtained in junior sizes for small arms.
- **All protective equipment must be properly sized for the archer.**

Sights.

- Not recommended for Cub Scouts.
- As the fundamentals of archery are learned, it is recommended that sights be added to the bow. Least expensive may be a simple quilter’s pin affixed at the sight window by foam tape applied to the back of the handle.
- Relatively inexpensive target sights may be added to the bow, which will be a tremendous aid to the shooter for qualifying or competition.

Targets.

Cub Scouts. It is recommended that large-diameter target mats and faces be used to ensure success and to reduce the number of lost arrows. Ethafoam mats are commercially available in 48-inch, 36-inch, and 32-inch diameters, with five-color target faces to match. Animal, zombie, and human silhouettes are not approved for Cub Scout use.

Set the target line at no more than 10 yards in front of the shooting line, adding to the success of young archers. The mat should be mounted relatively low to the ground to make it easier to extract arrows from the target.

Scouts BSA. It is recommended that large-diameter target mats and faces be used to ensure success and to reduce the number of lost arrows. Ethafoam mats are commercially available in 48-inch, 36-inch, and 32-inch diameters, with five-color target faces to match.

Scouts BSA participants are allowed to use tasteful and appropriate animal silhouette targets (paper and 3-D targets). Appropriate animal silhouette targets include wild game species that are normally hunted. Human form and zombie silhouettes are not approved for use.

Venturers and Sea Scouts. For new shooters, it is recommended that large-diameter target mats and faces be used to ensure success and to reduce the number of lost arrows. Ethafoam mats are commercially available in 48-inch, 36-inch, and 32-inch diameters, with five-color target faces to match. As Venturers and Sea Scouts develop skill, various target games and shooting distances may be introduced to provide a challenge for the participant. Venturers and Sea Scouts are allowed to use tasteful and appropriate animal silhouette targets (paper and 3-D targets). Appropriate animal silhouette targets include wild game species that are normally hunted. Human form and zombie silhouettes are not approved for use.

CHAPTER 6: SAFETY

Scouting America adheres to its longstanding policy of teaching its youth and adult members the safe, responsible, and intelligent handling, care, and use of firearms, throwing equipment and bow and arrow in planned, carefully managed, and supervised programs.

Safe gun handling is of paramount importance. You must treat every firearm as if it were loaded. With that in mind, there are several universal rules of safe gun handling that must always be followed.

1. **Always** keep the gun pointed in a safe direction.
2. **Always** keep your finger off the trigger until ready to shoot.
3. **Always** keep the gun unloaded until ready to use.

Communications

Each range should have reliable communication with the appropriate staff overseeing the event or activity.

Emergency Response Plans

A complete first-aid kit should be centrally located near the ranges. The location of the first-aid kit should be prominently marked. In the event of an accident, the established emergency protocols for the camp or activity should be followed.

National Camping Standards

For standards related to range and target activities and day camp, short-term and long term camp operation and management procedures, refer to the current National Camp Accreditation Program Standards at www.scouting.org/NCAP.

Standard Operating Procedures

All ranges must have their own written standard operating procedures (SOP) and have them posted at the range. See Appendix for a sample of an SOP.

Equipment Inspections—Firearms and Archery

Prior to range operation, equipment must be inspected for safety and proper function. This inspection includes the firearm or apparatus being used as well as all protective equipment. During this inspection if any equipment is deemed unsafe or not sized appropriately for the participants, it must not be used. These inspections should be in advance of the activity or camp so if needed, corrective action can take place.

SAFE checklist

All shooting and throwing sports activities are expected to follow the Scouting America SAFE checklist. Leaders and staff conducting shooting sports activities must conduct this checklist prior to the event or activity. For a model SAFE checklist for range and target activities see the SAFE checklist at the beginning of this manual.

CHAPTER 7: ADDITIONAL CONSIDERATIONS

General

Lead protection. Lead is a soft, dense metal that is an integral part of most bullets. Lead is toxic to humans in relatively small concentrations, with the most susceptible organs being the eyes, central nervous system, and gastrointestinal tract. Handling ammunition, setting up a range for shooting, counting out rounds for firing, loading and unloading a firearm, discharging a firearm, and cleaning a firearm can all leave lead residues on the skin. Two easy precautions can minimize the risk of inhaling or ingesting lead residues. First, when handling ammunition or a recently discharged firearm, minimize contact of the hands with other parts of the body, particularly the eyes, mouth, and skin. When you are finished handling ammunition or firearms, immediately wash your hands with soap and cold water. It is strongly recommended that a handwashing station be next to all ranges and storage areas where ammunition or firearms may be handled or used. Food and drink should not be permitted on a range or in storage areas.

The use of lead can also be an environmental concern and may require some additional consideration for a local council or the landowner. Care needs to be taken to contain the impact of the range on the environment.

Other environmental impacts: The discharge of a firearm can cause a loud report. This noise can also become an environmental concern when the range is close to neighbors or other land owners. Care must be taken in the selection of range locations keeping in mind the noise that could be caused during range and target activities.

Cleaning solvents. Solvents used for cleaning firearms typically contain petroleum distillates, ammonia, caustics, and other potentially hazardous chemicals. Hazards may include skin damage, lightheadedness caused by vapors, and risk of fire. In addition, once the solvent has done its job of cleaning a firearm, it not only contains the original chemicals, but now contains the residues from the firearm, which may include lead, copper, gunpowder, and burned plastic. As with lead, contact with the eyes, mouth, and skin should be discouraged while handling firearm cleaning solvents. Use of appropriate gloves and eye protection are strongly recommended when using any cleaning materials and solvents. Food and drink should not be allowed in areas where cleaning takes place. A hand washing station with soap and cold water should be available near the firearm maintenance/cleaning area.

Considerations for people with special needs and disabilities. Another consideration concerns participants who may have physical, intellectual, cognitive and/or developmental challenges. Every effort should be made to serve all youth and adults in Scouting. This may require modification of facilities, equipment, content delivery or processes. Safety is the number one concern. The question may need to be asked to how accommodations can be made so that any individual can shoot safely. Considerations to influence the course of action may include: What challenges are afforded by the special need or disability? Does the participant have someone helping them? Can you communicate effectively with the participant and helper? Ask the participant, parent, and/or unit leader what is the best way to accommodate the participant (never assume disability is synonymous with inability). It may be necessary to temporarily close the range to other participants so you can work one on one on the range with a participant with the special need. Consideration must also be given to the provisions of the Americans With Disabilities Act.

For information about adaptive shooting with range and target activities, visit the inclusion toolbox <https://ablescouts.org/toolbox/>

CHAPTER 8: TRAINING COURSES

In Scouting events and activities, our primary consideration is the safety of youth and adult members. To achieve that goal, Scouting America, in consultation with other organizations, has created specific guidelines for range and target activities. These organizations also provide training and instructor certification by discipline-specific subject matter experts to prepare those individuals who will serve in a leadership or supervisory role in the various shooting sports activities.

In general, for all certifying organizations, the instructor candidate must meet specific eligibility requirements, satisfactorily complete the instructor training curriculum, understand and agree to the responsibilities of a certified instructor, and maintain active certification status.

Listed here are the shooting sports training certifications recognized by Scouting America.

Scouting America Training

Range SAFETY Online Training for Units

At a minimum, all Scouts BSA troops, Venturing crews, and Sea Scout ships who provide unit-level sponsored/planned range and target activities must have at least one registered unit leader 21+ years of age take the Range Activity SAFETY online training at my.Scouting. This individual must be present at the range during the activity.

Scouting America National Camping School

Annually, seven-day National Camping Schools are conducted. The purpose of the National Camping School is to prepare Scouters who will be serving in management or supervisory roles in a council camp. Those who successfully complete the range activities section of the National Camping School, will be given a certificate of training as a Range Activities Director, which is valid for five camping seasons.

Participation must be approved by a local Scout executive, and enrollment is administered through the local council. For more information about National Camping School visit <https://www.scouting.org/outdoor-programs/national-camping-school/>

It is also expected that the Scouting America range and target activities will serve the council as a resource year-round and be an active member of the council's range and target activities committee.

Rangemaster Training

Operation of BB, archery, and slingshot ranges for activities and events, including day camp, long-term camp, and short-term camping programs require qualified, trained Rangemasters.

BB/slingshot rangemaster and archery rangemaster training (2 separate courses) are administered by the council's range and target activities committee and conducted by a National Camping School certified range activities director or a council approved currently certified National Rifle Association rifle instructor for the BB/slingshot rangemaster and a USA Archery instructor certification for archery rangemaster. In either case the instructor must be familiar with the Scouting America program for which they are instructing (ex. NRA rifle instructor must be familiar with Cub Scout range and target activities if instructing BB range course for Cub Scout BB rangemaster.)

These BB/Slingshot rangemaster and Archery Rangemaster certifications are valid for two years from the date of the training.

A currently certified NRA rifle instructor is qualified to serve as a BB/slingshot rangemaster only if that person is familiar with the program policies and delivery of the Scouting America program they will oversee. A currently certified USA Archery Level 1 instructor or higher may serve as the Archery Rangemaster for archery activities.

National Rifle Association Training

NRA Certified Rifle Instructor

A NRA Certified Rifle Instructor is required to provide instruction for Scouting America rifle shooting activities involving Scouts BSA, Venturers, and Sea Scouts.

The NRA rifle instructor may teach the Scouting America 30-Minute Rifle Briefing, the NRA FIRST Steps Rifle Orientation, Scouting America Rangemaster training, the Rifle Shooting merit badge using the Rifle Shooting Merit Badge Teaching Guide, and the eight-hour NRA Basic Rifle Course.

A currently certified NRA rifle instructor is qualified to serve as a BB Rangemaster for BB shooting and sling shot shooting activities provided the individual is familiar with the programs of Scouting America they will oversee.

NRA Certified Shotgun Instructor

An NRA certified shotgun instructor is required to provide instruction for Scouting America shotgun shooting activities involving Scouts BSA, Venturers, and Sea Scouts.

The NRA shotgun instructor may teach the Scouting America 30-Minute Shotgun Briefing, the NRA FIRST Steps Shotgun Orientation, the Shotgun Shooting merit badge using the Shotgun Shooting Merit Badge Teaching Guide, and the eight-hour NRA Basic Shotgun Course.

NRA Certified Pistol Instructor

An NRA certified pistol instructor is required to provide supervision for Scouting America pistol shooting activities involving Scouts BSA, Venturers and Sea Scouts.

The NRA pistol instructor may teach the Scouting America 30-Minute Pistol Briefing, the NRA FIRST Steps Pistol Orientation involving older Scouts BSA youth, Venturing and Sea Scouts. Older Scouts BSA members must be 13 years of age and have completed eighth grade or be 14 years of age.

NRA Co-Op Muzzleloading Rifle Certified Instructor

An NRA certified Co-Op muzzleloading rifle OR an NRA/NMLRA certified muzzleloading instructor is required to provide supervision for BSA muzzleloading rifle shooting activities involving Scouts BSA, Venturers, and Sea Scouts.

NRA/National MuzzleLoading Rifle Association Certified Muzzleloading Rifle Instructor

The NRA certified co-op muzzleloading rifle or full NRA/NMLRA muzzleloading instructor is required to provide supervision for Scouting America muzzleloading rifle shooting activities involving Scouts BSA, Venturers, and Sea Scouts.

The NRA Co-Op muzzleloading rifle instructor or the NRA/NMLRA muzzleloading instructor may teach the NRA Basic Co-Op Muzzleloading Rifle Shooting Course and the muzzleloading option of the Rifle Shooting merit badge.

The NRA co-op muzzleloading rifle instructor may teach the NRA Basic Co-op Muzzleloading Rifle Shooting Course, and the Muzzleloading option of the Rifle Shooting merit badge.

NRA/National MuzzleLoading Rifle Association Certified Instructor

An NRA/NMLRA certified muzzleloading instructor is required to provide supervision for Scouting America muzzleloading shotgun shooting activities involving Scouts BSA, Venturers, and Sea Scouts.

The NRA/NMLRA muzzleloading instructor may teach the NRA Basic Muzzleloading Shooting Course and the muzzleloading option of the Shotgun Shooting merit badge.

The NRA/NMLRA muzzleloading instructor may teach the NRA Basic Muzzleloading Shooting Course to Venturers and Sea Scouts.

NRA Range Safety Officer

An NRA Range Safety Officer is required to provide live firing range supervision for all shooting activities involving Scouts BSA, Venturers, and Sea Scouts. No other certification is accepted.

The NRA Range Safety Officer is responsible for the range management.

NRA Chief Range Safety Officer

An NRA chief Range Safety Officer or an NRA training counselor is qualified to teach the NRA basic Range Safety Officer course. The Chief Range Safety Officer may also assist Scouting activities in the role of the Range Safety Officer.

NRA Training Counselor

Qualified, experienced, certified instructors may apply for appointment as a training counselor to recruit and train new instructors to teach basic firearms training courses. For information about becoming a NRA training counselor visit www.nrainstructors.org.

Archery Training

USA Archery Level 1 Instructor

The USA Archery Level 1 Instructor Certification course is administered by USA Archery, the national governing body for the Sport of Archery in the U.S., USA Archery, the National Field Archery Association and the Archery Shooters Association jointly recognize all certification levels.

Candidates for the USA Archery Level 1 instructor certification are primarily camp archery staff and those working with entry-level students. The USA Level 1 Archery Instructor Certification Course provides

graduates the necessary tools to maintain a high level of safety both on and off the archery range. The Level 1 Instructor will learn about range safety, range setup, the steps of shooting, equipment and repair, programs and lesson plans and is well prepared to teach beginner archery programs to people of all ages and abilities in a variety of disciplines.

USA Archery Level 1 Archery Instructors may teach the Basic Archery course and the Archery merit badge.

In addition, the certified instructor may serve as a Rangemaster for a Cub Scout archery activity.

USA Archery Level 2 Instructor

The Level 2 Archery Instructor Certification Course includes the USA Level 1 Archery Instructor Certification Course and provides students with an introduction to the National Training System (NTS) Steps of Shooting for recurve and compound, equipment and accessory setup, athlete development and events. Candidates for the Level 2 instructor certification are instructors age 18 and older and Level 2 instructors may also take an online course to become a USA Archery Instructor Trainer so that they may train USA Archery Level 1 and USA Archery Level 2 instructors.

When the piston is completely retracted, the mainspring is fully compressed. The piston will remain in this retracted position until the shooter releases it by pulling the trigger. The piston, under pressure from the compressed mainspring, moves rapidly forward when it is released, and compresses the air in front of it. The compressed air then forces the projectile out of the barrel.

In this type of air gun, the air that propels the projectile is not stored in a reservoir prior to firing; the air is compressed by the movement of the piston after the trigger is pulled.

Pneumatic Guns

Pneumatic air guns use the principle of stored compressed air or gas and can be divided into two categories: single-stroke/multi-pump guns and compressed CO₂/air guns.

Air Gun Ammunition

There are five basic types of air gun ammunition: BBs, pellets, lead balls, darts, and bolts.

Keep BB Gun shooting equipment in good condition. Repairing guns and keeping target faces and mats in good condition can save money and make shooting experiences more successful.

Eye Protection

Eye protection must be available for all individuals on a BB Gun range. The best ones are those with side shields.

Backstops

Baled straw stacked behind the target will stop shots. Also, several layers of burlap, old canvas, or rugs hanging loosely over a horizontal pole or plank 1 or 2 inches wide will stop many shots. If tarps are used, check them for weakness during the season. Heavy duty moving blankets may also be used as long as it is monitored.

Cub Scouts (except for Lion Scouts) can earn the BB gun elective adventure for their rank. Information on these electives can be found at www.scouting.org/outdoorprograms.

How To Set Up Outdoor Target BB Gun Range

Set up for wide-open, cleared space. Utilize the range design guideline for BB gun ranges #314. You can download the range design guidelines at <https://www.scouting.org/outdoor-programs/properties/resources/design-guidelines/>.

1. Select the Orientation of the Range
 - Avoid shooting into the sun by facing North.

- The ground should be flat and free of obstacles.
- Look for a natural backstop such as a berm to stop BB's, or a ballistic cloth or double layer, heavy duty tarp capable of stopping a bb as a trap. If there is no berm, provide a minimum of 195 yards of open area behind the targets.
- The safety zone on the side should be 30-50 feet.

2. Place Range and Safety Lines

- Rope, eco-friendly spray paint or chalk are ways to lay down the range lines outdoors. Follow the guidelines illustrated on the following page.
- Shooting Line – The Shooting Line is between 15-30 feet from the Target Line depending on the skill level of the participants.
- Waiting Line – Shooters stand behind the Waiting Line before and after shooting their arrows. It is meant to act as a safety area between the class and the Shooting Line. The Waiting Line is placed 15 feet behind the Shooting Line.
- OPTIONAL: Controlled Access/Spectator Line – Anyone who wants to watch participants shoot can gather behind this line. This line needs to be placed far enough behind the Waiting Line to prevent distraction from the spectators (at minimum 15 feet)

3. Set Up Targets

- Place targets in front of the natural berm. If a natural berm is not available, place targets in a wide-open space with a minimum safety zone of 150 feet behind the targets.
- Evenly space targets in front of the berm. Space between targets is dependent on placement of shooting positions.
- One method of hanging targets is to put up posts to hold "snow fence." Attach the snow fence to the posts. Targets can be attached to the snow fence with clothes pins.
- A temporary target holder can be made using old political signs with their wire ground stands. (Paint over the political signs if they are used.)

4. Place the Equipment

- Eye protection should be available in the waiting area. All participants on the range must wear eye protection.
- BB Guns – May be on the top of the bench if using bench rest positions, or on the mat used for the prone positions. If shooters are shooting from the free-arm standing position, there should be some type of stand where the guns may be placed when not in use.
- BB's – Should be between the shooting line and the ready line under the control of the rangemaster.

ARCHERY

Archery is a colorful, interesting, and worthwhile activity for youth. The beginner gets immediate satisfaction yet finds a continuous challenge as they develop into a skilled archer. This activity provides good physical exercise and develops powers of concentration and coordination.

The goal is to teach Lion and Tiger Cubs with their adult partners, Wolf Cub Scouts, Bear Cub Scouts, and Webelos and Arrow of Light Scouts how to use the bow and arrow safely. Archery is approved for all levels of Scouting.

A Brief History of Archery

The advancement of civilization was enhanced by the use and discovery of bows and arrows. The bow and arrow provided a much safer way to hunt and made life easier.

Generally it is thought the spear was the predecessor to the bow. Spearheads have been discovered from many thousands of years ago.

A recognizable bow was discovered dating back to 6000 B.C. that was made from yew or elm.

Egyptians, somewhere around 3500 B.C. to 2800 B.C., are considered the first to use the bow in battle, which gave them superiority over their enemies. This bow was known as a composite bow.

Assyrians developed a shorter recurve bow that provided more power and easier handling around 1500 B.C. Crossbows were also used in ancient China.

About this same time, the Parthians became famous for shooting backwards while riding a horse. The term “Parthian shot” is still used today in archery.

Heracles, a Greek hero, was very well known for his help with the siege of Troy around 1260 B.C.–1240 B.C. As a direct result of Heracles’ help, the city of Troy fell through the use of the Trojan Horse.

Around 1200 B.C., a famous Egyptian pharaoh named Rameses II gave archery another boost by putting archers on chariots. This mobility allowed the Egyptians to defeat the Hittite army.

Through the course of time the wooden bow was made longer. The British were famous for improving on the bow, which eventually became known as the British longbow. The most famous battle of the longbow was the battle of Crecy in 1346. In 1500, crossbows were banned in England to promote the use of the longbow. In 1595, the army was ordered to replace all bows with muskets. However, archery has remained a popular sport activity in England.

Some of the first archery clubs were formed in England. Competitions were part of their way of life. The English are noted for the three forms of shooting. Butt shooting is where targets are mounted on mounds at 100 to 140 yards. Clout shooting is where targets

are mounted on the ground with a wooden stay in the center. For these two forms, arrows are shot upward to descend on the target. For the third form of shooting, roving archers shoot at simulated small animals over varying ranges on unprepared ground and courses.

Around 1000 A.D., bow and arrow technology swept the Americas. As seen through archeological studies, its use was adopted by most prehistoric native Americans.

In 1879 the National Archery Association was founded. The first national tournament was held in White Stocking Park in Chicago the same year. The first archery club in the United States, the United Bowmen of Philadelphia, was founded in 1928.

In 1900 archery became part of the Olympic games. It was dropped after 1920 because the wide range of rules could not be standardized. In 1931, the Federation Internationale de Tir à l’Arc (FITA) was founded in Paris and standardized the rules for international competition, but it was not until 1972 that archery was again a part of the Olympic program.

Leadership

Archery must be conducted by trained, qualified on-site Rangemasters who direct the operation of the range program and archery instruction. To qualify as an archery Rangemaster, the Rangemaster must be at least 18 years old and be trained by a National Camping School-trained range activities director or a USA Archery/NFAA instructor.

The local council issues a Training Course Pocket Certificate, No. 33767, and keeps a record of those who have been certified. Archery Rangemaster, course code CS 31. Certification must be renewed every two years.

Training Cub Scouts

The objective is to teach Cub Scouts how to shoot a bow and arrow and to have fun safely.

This instruction is designed for immediate participation and success. For example, beginning archers tend to shoot high because they want to look at the point of their arrows. By placing the bottom of the targets on the ground at 10 yards, rather than at the traditional 48-inch level at 25 yards, fewer arrows miss the target. This means more class time can be spent on shooting and less on looking for arrows.

Before handing out equipment, check each archer’s eye dominance, page 66. Also, look for loose objects on the archers such as pins, pencils, loose sweaters, and watches that could get in the way of shooting.

For the best learning experience, give each Cub Scout a bow, an arm guard, a finger tab, a quiver, and six arrows. If it is not possible for each to have a bow, one bow might be shared by two or more archers.

Caution the class to hold the items but to not shoot until you give exact instructions to do so. Bows should already be strung at the first session. Stringing and unstringing bows may be taught later.

For beginning instruction, have left-handed archers grouped at the right end of the shooting line to allow them a better view of the Rangemaster as they demonstrate.

Instruction takes place at the shooting line. Explain the use of whistles, page 66.

Teaching Tips

The coach-pupil method is effective for all types of skill training and is particularly effective in range and target activities. To put this method into practice:

1. Put the bow in the archer's hand as soon as possible so they can understand the tool while the basics are explained.
2. Group archers into pairs (Scout and parent/guardian would be ideal.) Check for loose items on the bow side of the archer that could interfere with their shooting.
3. The instructor demonstrates the activity or action to be followed before the whole group. When demonstrating techniques, be sure to do them correctly. The instructor then circulates among the pairs, giving a word of advice or assistance, recognizing good work, correcting errors, and determining how well the archers understand the method.
4. Check the archer's finger tab closely before they shoot. Watch for four fingers on the string. Look for cramped fingers on the bowstring. Watch the thumb on the drawing hand. If an archer masters the draw and anchor quite readily, stand behind them and check that when the string is released it will not hit the arm or chest of the archer when they shoot.
5. The archer practices while their partner coaches. Let archers shoot the first arrow as soon as possible, even if the bow hand, anchor, draw, etc., are not perfect.
6. At a predetermined signal, the positions are reversed if using coach/pupil.
7. Progressively, archers are learning by observing, by doing, and by coaching.
8. Use a positive approach. Use praise sincerely. Before making a correction, figure out the fault to find the cause. Never correct a student after spotting a fault on one arrow shot.
9. Avoid long discussions on learning the parts of equipment used. Teach just enough so archers will know how to safely use the equipment.
10. Allow each archer to feel the satisfaction of hitting the target as quickly as possible.

Cub Scout Archery Training—Youth

Section I (20 minutes)

- A. Safety Guidelines, page 66
- B. Equipment, page 69
 1. Review bows, bowstrings, arrows, arm guards, finger tabs, quivers, points of aim, target butts, target faces, and backstops.
 2. Review how to maintain, store, and care for equipment.
 3. Review how to string and unstring a bow. (*Optional*)

Section II (40 minutes)

- A. Archery Shooting Basics, page 66
 1. Eye Dominance, page 66
 2. Stance, page 66
 3. Nock the Arrow, page 67
 4. Establish the Bow Hold, page 67
 5. Draw, page 67
 6. Aim, page 67
 7. Anchor, page 67
 8. Release or Loose, page 67
 9. Follow-Through, page 67
 10. Retrieve Arrows, page 67
- B. Practice, practice, practice

Section III (60 minutes) (*optional activities*)

- A. The difference between an End and a Round, page 68
- B. Archery Games & Activities, page 68
- C. Cub Scout Awards Archery Elective Adventures (Visit www.scouting.org/outdoorprograms)

Lion and Tiger Cubs and Archery

Lion and Tiger Cubs and their adult partners may participate in archery activities. The adult partners must be included in all archery activities. Each Lion and Tiger Cub must be paired with their adult partner before being allowed to shoot.

Keep in mind that youth of this age have very short attention spans (20 to 30 minutes maximum), and tire easily. They probably have little previous experience working as a group and may require more time to understand how the range operates. Lion and Tiger Cubs have a wide range of ability and experience levels, so be ready for anything!

Safety Guidelines

Lion and Tiger Cubs with their adult partners, Wolf Cub Scouts, Bear Cub Scouts, Webelos Scouts, and Arrow of Light Scouts should learn these simple safety rules. When training archers to shoot, be sure to have the proper equipment, secure and safe ranges, and clear safety instruction.

1. Observe all state and local laws on using a bow and arrow.
2. Shoot only with proper range supervision.
3. Always check your equipment before shooting. All defective equipment should immediately be removed from the range.
4. Be sure to include all of the safety guidelines and the proper whistle codes.
5. Bows and arrows should be used only in places set aside for their use.
6. Use only arrows that have been measured for your proper draw length. Arrows that are too short may cause personal injury or damage to the bow and arrow.
7. Always wear an arm guard and finger tab or glove.
8. Keep the arrows in the quiver until everyone is on or behind the shooting line and the Rangemaster has indicated that you may get in proper shooting position.
9. **Archers straddle the shooting line, with one foot on either side.**
10. Always keep your arrows pointed down or toward the target.
11. Only release an arrow when you can see its full clear path to the target.
12. Shoot only at the target in front of you.
13. Stop shooting immediately upon signal from the Rangemaster or if anyone crosses in front of the shooting line or in front of or behind the targets.
14. Always walk, never run, when on the archery range or while carrying arrows.
15. Stay on marked paths. Travel the direction in which the targets are marked.
16. On a target range, leave the bow at the shooting line.
17. Always practice courtesy and good sportsmanship.

Know the Proper Whistle Codes

Two blasts. Move up to the shooting line.

One blast. Fire the proper number of arrows.

Three blasts. Cease firing. Move to the target. Retrieve and score arrows.

Five or more whistle blasts. Cease firing. Stay where you are. This is an EMERGENCY. Officials will tell the archers what action to take either verbally or by whistle code.

Remember, there is only ONE command to shoot – ONE blast of the whistle.

For any command of more than one blast, STOP shooting. Watch and listen for further instructions.

Sun Safety on the Archery Range

The American Academy of Dermatology advises the following protection tips against damaging rays:

- Limit exposure to sun between 10 a.m. and 4 p.m. when the sun's rays are the strongest.
- Generously apply sunscreen with a sun protection factor (SPF) of at least 15 and reapply it every two hours when outdoors, even on cloudy days.
- Wear protective, tightly woven clothing, such as a long-sleeved shirt and pants.
- Wear a hat with a wide, 4-inch brim and sunglasses with UV protective lenses.
- Stay in the shade whenever possible.
- Avoid reflective surfaces, which can reflect up to 85% of the sun's damaging rays.

Archery Shooting Basics

The following instructions are written for right-handed archers. When training left-handed archers, reverse the instructions as necessary.

Eye Dominance

Before shooting a bow, the archers should determine which eye is dominant. Just as people are either right- or left-handed, one eye is more dominant than the other. Discovering which eye an archer favors is important because it could determine on which side the bow should be held.

To find which eye is dominant, have archers extend both arms in front of them and form a small hole with their thumbs and index fingers. Instruct them to look at a distant object through the opening and then pull their hands back to their face. The eye that is in line with the object is dominant.

Assign archers, leaders, and parents in pairs to assist each other, then have them check with the Rangemaster.

Archers should usually draw back the bowstring with their dominant hand, even if it does not match their dominant eye. If they are cross-dominant, you may suggest they close their dominant eye while shooting.

Stance

Stance is the correct foot position of the archer. The goal is to provide a solid foundation for the shot. An archer is most stable in an open stance.

1. Stand with feet **straddling** the shooting line.
2. Feet should be about shoulder-width apart.

3. Move the foot closest to the target back about 3 inches.
4. Turn the toes of both feet toward the target about 30 degrees.

Nock The Arrow

To nock the arrow is to securely place the arrow on the bowstring. When the arrow is securely placed on the bowstring the archer feels and/or hears the arrow “snap” into place.

1. Grasp the arrow below the nock.
2. Bring the arrow up and over the bow and place it on the arrow rest.
3. Spin the arrow so the index vane (usually a different color) points away from the riser (bow) and towards the archer’s body.
4. Push the nock into place on the bowstring directly below the nocking point.

Hook and Grip

Archers touch the bow in only two places: the bowstring where they “hook” it, and at the grip where they “grip” the bow. *Hook* is when an archer curls three fingers around the bowstring directly beneath the arrow. The *grip* on a bow is where the archer places their hand on the bow.

1. Curl the bowstring with the fingertips of the index, middle, and ring fingers under the arrow.
2. Pull the bowstring back enough to apply a small amount of tension.
3. Center the meaty part of the thumb on the back of the bow grip.
4. Point the thumb toward the target and angle your knuckles 45 degrees. Check to be sure the grip is relaxed.

Raise the Bow

This step gives the archer the opportunity to confirm that all previous steps have been completed before proceeding. Once that is done, do the following:

1. Turn the head toward the target.
2. Rotate the elbow of the bow arm away from the bowstring.
3. Lift both arms to shoulder height.
4. Extend the bow arm fully, keeping the bow vertical.

The archer raises the bow in preparation for drawing back the bowstring. This gives the archer a sense of direction by knowing where the bow is in relation to the target. While raising the bow, it is important to keep the rest of the body still.

Draw

Pull the bowstring back toward the face. The draw is seamless and smooth.

Anchor

The archer should pull the bowstring back to a consistent anchor point every time to maintain accuracy. For beginning archers, the corner of the mouth is the preferred anchor point.

1. Settle the index finger of the draw hand into the corner of the mouth.
2. Keep the draw hand relaxed and against the face.

Hold

Move the draw arm elbow slightly behind the arrow to brace the draw weight of the bow. The tension of holding the bow is not transferred from the shoulder and arm muscles to the back muscles

Aim

Aim is lining up the arrow to the target. Simply put, the arrow will go where it is pointed. The goal is to focus equally on the target and the arrow point.

1. Place the point of the arrow on the intended target area.
2. The eye focus is equally on the arrow point and the target.

Release/Follow-Through

Release occurs when the archer relaxes the tips of the fingers that are hooking the bowstring, allowing the bowstring to push the fingers out of the way. Follow-through is the finish position.

1. Relax the fingertips to allow the bowstring to push the fingers out of the way.
2. Keep the bow arm up.
3. Finish the shot by allowing the draw hand to fall between the ear and the shoulder.

Retrieve Arrows

After all archers have shot their allotment of arrows (usually around five, if time permits), demonstrate and explain the proper methods to retrieve arrows from the target and ground.

First, before any archer goes to retrieve arrows, permission must be granted by the range officer. The range officer will observe the archers and indicate when all archers have completed shooting and it is safe to retrieve arrows.

1. Follow the proper commands to move to the target line. (*Three whistle blasts.*) Archers should walk slowly to the target line and watch for arrows on the ground.

2. Remove arrows by standing to the side of the target and brace it with the side of the body. Place one hand on the target at the base of the arrow. **(If two people are shooting at the same target, only one should remove their arrows at a time. The other archer should stand back at the target line.)**
3. Grasp the arrow near the target and pull firmly and slowly straight back toward the shooting line.
4. Place the arrow on the ground.
5. Remove the others in the same manner and place them on the ground.
6. After all the arrows have been removed, pick up the arrows from the ground. Cover the points with one hand and grasp the arrows near the fletchings(vanes) with the other hand. If an arrow is buried under the grass, it should be withdrawn by pulling it forward without lifting until it is clear of the grass.
7. Walk back to the shooting line carrying the arrows parallel to the ground with both hands in front of the body. Place the arrows into the quiver, point down.
8. Move off the range, or prepare to resume shooting as commanded.

Archery Games and Activities

A variety of games or activities can be done using archery skills. Different ranges could be set up to play a particular game, or courses could be set up where archers go from station to station. Archery games and alternate activities work well, especially when archers are in camp for more than one day or if a council sponsors a special archery camp for Cub Scouts.

Remember, any place there is an archery range and there is archery shooting, even when playing a game or activity, a qualified archery Rangemaster must be present.

Shooting games are designed to improve shooting skills. Remember, safety is a must.

The following activities and opportunities would be appropriate for Lion and Tiger Cub Scouts with their adult partners, Wolf Cub Scouts, Bear Cub Scouts, Webelos Scouts, and Arrow of Light Scouts.

Shooting a Competitive Round

When shooting a competitive round, an “end” is shooting six arrows at a target. A “round” is the total number of ends to complete the round.

For example: An **American round**, in archery, a target-shooting event consisting of **five ends** (six arrows each), shot from distances of 60, 50, and 40 yards

Tic Tac Toe

Place a Tic-Tac-Toe grid on a target back (You can use flip-chart paper to make the grid or put up nine separate sheets of paper in a 3x3 grid pattern.) Divide the group into two lines, and have them stand in a single file 20 feet from the target. Each team will alternate their archers. Each archer will shoot one arrow and step back. The second and each succeeding archer will shoot one at a time. The first team to get complete a horizontal, vertical, or diagonal row wins.

Wand Shooting

Place a strip of 1-inch masking tape over the target face from top to bottom. A point is scored when an arrow hits the tape anywhere on the target. Divide the group into two lines, and have them stand in a single file 20 feet from the target. At the signal to shoot, each archer will shoot one arrow and step back. The second and each succeeding archer will shoot one at a time. The first team to get two points is the winning team.

Balloon Bust

Place a variety of balloons on a target mat. (They may be different sizes and colors.) Divide the group into two lines and have them stand in a single file 20 feet from the target. At the signal to shoot, each archer will shoot one arrow and step back. The second and each succeeding archer will shoot one at a time. The first team to break a set number of balloons is the winning team.

Archery Practice Fun

Any station set up for participants to practice skills can be fun for Cub Scouts. The archers have limited times to shoot arrows, so the opportunity to practice at a council camp or event is a great experience for them.

Range Layout

A sample outdoor archery range layout is posted online at <https://www.scouting.org/outdoor-programs/properties/resources/design-guidelines>. Safety is a primary concern when operating an archery range, and the safety rules must be followed.

If at all possible, the range should be laid out so shooting is done in a northerly direction so archers are never facing the sun. To protect arrows, all outcropping rocks should be reduced to ground level. Grass should be planted so a good sod is developed. Keep grass cut close and raked clear. Sandy soils need no ground cover.

Important! Arrange facilities so there is no possibility of non-participants inadvertently walking behind the targets while shooting is in progress!

Inflatable Ranges Only commercially manufactured equipment is allowed to be used. *(This activity must be supervised by a Scouting America certified Archery*

Rangemaster or USA Archery Level 1 or higher instructor.)

If an inflatable range is utilized, appropriate side and rear boundaries must be in place. (Minimum 10 ft. on the side, 15 ft. behind the target zone and 15 feet behind the shooting line.) There must also be a distinct gated entrance to access the shooting line. (*Manufacturers guidelines must always be followed if they are more stringent, and you may only use manufacturers recommended equipment.*)

Range Operation Rules

1. Never operate a range without adult supervision.
2. Be sure all safety rules are understood and followed.
3. Range flags must be flown while the range is in use.
4. Check all equipment before using to be sure bows, bowstrings, and arrows are in safe condition.
5. All spectators and archers waiting to shoot must remain behind the waiting line at least 3 yards behind the shooting line.
6. Archers must wear shoes on the range at all times.
7. Archers may not allow anyone to hold a target for them.
8. Archers must not talk or disturb shooters on either side when they are shooting.
9. Archers stay on the shooting line until their target partners have shot their last arrows, and then both step back together.
10. Use the proper whistle codes.
11. Use the proper scoring techniques.
12. Always walk on the range.

Sample Range Rules Poster



ARCHERY RANGE RULES AND COMMANDS

ARCHERY RANGE RULES

1. Always walk on the range.
2. Keep your arrows in your quiver until you are told to shoot.
3. Only release the bow string when an arrow is nocked and safely pointed toward the target.
4. Leave dropped arrows on the ground until instructed to retrieve them.

If there is an emergency on the range, immediately tell the instructor.

WHISTLE COMMANDS

2 WHISTLE BLASTS = Go to the line.

1 WHISTLE BLAST = Shoot.

3 WHISTLE BLASTS = Retrieve arrows.

5 OR MORE WHISTLE BLASTS = Emergency. Immediately stop shooting, return bows to the rack, and go behind the waiting line.

(From USAA Archery Certification Course – Level 1 manual. Used with permission.)

This poster can be found in the Appendix of this guide.

Equipment

When not in use, archery equipment must be kept in locked storage to protect it from weather, rodents, and theft.

Bows

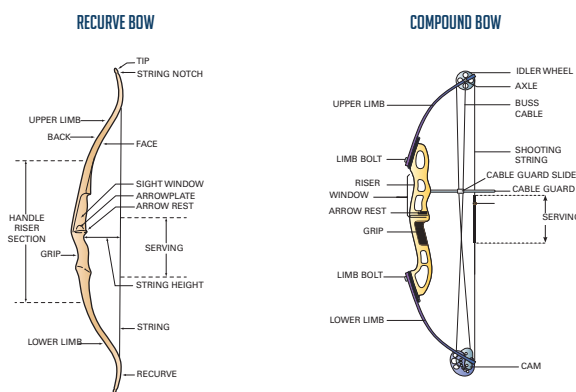
The two most common bows used by Cub Scouts are:

Recurve: Recurve bows are the traditional bows for learners. It allows the archer to better learn the proper finger tension. Modern recurve bows are made entirely either of fiberglass, or a composite of wood and fiberglass. Both options are satisfactory for beginning instruction.

Compound: Compound bows are generally harder to master, but they will produce more consistent results. The pulley system provides a mechanical advantage to assist where strength or stamina is an issue.



TYPES OF ARCHERY BOWS



This poster can be found in the Appendix of this guide.

Care of Bows

Some basics to follow in the care of your bows whether they be wood, metal or fiberglass:

- Never lay a bow on the ground.
- Never stand a bow on end.
- Store bows by laying them on pegs that support the bow in the handle riser section.
- Although finishes are waterproof, it is best to dry the bow if it gets wet. Bow wax will help preserve the finish on the bow.
- Carry a bow unbraced (unstrung) in a bow case to protect it from scratches and possible damage.
- Never leave a bow in an automobile as the heat from the sun may cause damage. Store bows unstrung and, if possible, in a cool place with moderate humidity.

Bowstrings

Keep the bowstring well waxed with either a commercial bowstring wax or one you make yourself using one part resin to three parts beeswax.

Inspect the string carefully before and after each day's shooting. If any of the strings are broken, discard the string. Check the serving and repair or replace it if it is loose or worn.

Replacement bowstrings should be ordered according to the length and weight of the bow. If a bow is marked 56 inches, 20 pounds, order a 56"-20# string. Do not order by the actual measured length of the string.

Bow Stringer

Always use a bow stringer to string a recurve bow. The step-through and push-pull methods can cause permanent damage to bows by twisting their limbs. A bow-stringer is a piece of string about 5 feet long that has a leather cap at each end. The larger cap attaches over the bottom bow notch and the smaller cap goes over the upper bow notch. The top cap is small enough for the bowstring to be slipped into the bow notch.

To string a bow, position the bottom end of the bowstring in the bottom notch and slip the caps of the bow-stringer over the ends of the bow. Holding the bow by the grip, allow the stringer to rest on the ground. Step on the center of the bow stringer and smoothly pull upward on the bow grip to tension the bow. Using the thumb and index finger, slide the top loop of the bow-stringer into the upper bow notch.

Check the bow to make sure the bowstring is properly in place. To unstring a bow, tension it and guide the top loop down. Bows that are not in use should be unstrung before being stored.

Arrows

A shaft made of carbon, aluminum, wood, fiberglass, or composite materials with a point on one end and a nock on the other end. Fletching, which can be either feathers or plastic vanes, are located on the arrow near the nock end.

One way to determine if an arrow is long enough for an archer is to place the nock of the arrow in the center of the chest and hold the shaft with both hands extended in front of them. The point of the arrow should extend at least one inch further than where their hands come together.

Field point: Similar to a target point and has a distinct shoulder, so that missed outdoor shots are easier to remove from obstacles such as tree stumps.

Fletching: The stabilizing feathers or vanes of an arrow.

Index fletch or vane: A different-colored fletch or vane used to indicate proper arrow positioning in relation to the bowstring or bow.

Nock: The plastic attachment or grooved notch at the end of an arrow used to attach the arrow to the bowstring.

Shaft: The main structural element of an arrow.

Target point: Attached to the front end of the arrow and penetrates the target.

Care of Arrows

Feathers on arrows should be kept dry. If the feathers become wet, wipe them dry and clean before storing. Separate the arrows until they are dry to allow the feathers to expand and regain their original shape. If the feathers are matted down, they can be steamed to return them to their original shape.

Discard any fiberglass or wooden arrows that have splinters or cracks in the shaft.

The arrows can be kept in the quivers during the season, but if they are not going to be used for several months, it is best to store them in the boxes in which they were received. These boxes have individual holes for each arrow. This will preserve the feathers and help prevent wooden arrows from warping.

Arm Guards

The arm guard is either leather or plastic with at least two elastic straps. It is slipped over the forearm that holds the bow and provides protection from the slap of the bowstring after the arrow is released.

Care of Arm Guards

Arm guards should have laces or elastic replaced when needed. Arm guards should be kept in labeled boxes. All leather goods will last longer if stored in a cool, dry place and occasionally cleaned with saddle soap.

Finger Tabs

Finger tabs are preferable to gloves for group instruction because they present fewer fitting problems. Made of smooth leather, finger tabs absorb the friction of the bowstring across the fingertips. Without them, painful blisters can develop. Many designs are available, but for beginners the simplest and most inexpensive type is satisfactory.

Every Cub Scout archer must use an arm guard and finger tabs.

Quivers

For novice shooters, having a quiver to use when returning arrows from the target to the shooting line will improve safety procedures.

Targets and Scoring

Target Butts

Targets for beginners should be about 48 inches in diameter and made of straw or Ethafoam. The target butts are placed on soft-pine tripods, about 6 inches off the ground. (Ethafoam is the proper material for a target butt. Plastic foam is messy and does not last long.) Keep the targets close to the ground so missed arrows will not go far and so younger archers can reach the highest arrows easily.

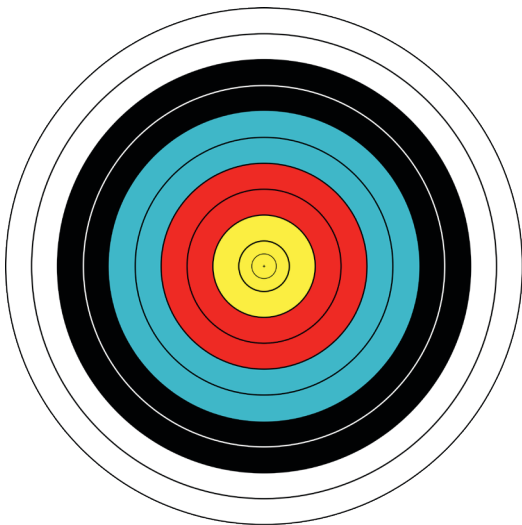
Three to five bales of straw may be stacked to serve as target butts. Make sure the bales are tied back to a post so they will not fall forward on someone pulling arrows. Care should be taken in stacking the bales to be sure they are very close together. Keep the bales off the ground by stacking them on old tires.

Target Faces

The 48-inch standard target face is recommended for use on outdoor ranges. These are printed on several types of material, including heavy paper, canvas, and oil cloth. If you use paper targets, paste them to light cardboard or they will not last long. Smaller targets are made to be shot at from shorter distances.

The target is made up of five concentric color zones. Each zone is divided by a thin line into two scoring zones of equal width. Each circle represents the following point values:

- Inner gold = 10 points
- Outer gold = 9 points
- Inner red = 8 points
- Outer red = 7 points
- Inner blue = 6 points
- Outer blue = 5 points
- Inner black = 4 points
- Outer black = 3 points
- Inner white = 2 points
- Outer white = 1 point



Care of Target Faces

Target faces should be removed from mats when the mats are being moistened. Masking tape applied to the back of a target face that is tearing from much use will help it last longer. Center patches that cover the gold and part of the red scoring areas on the target face will double the life of the target faces. The patches must be carefully aligned so the lines marking the scoring areas line up exactly.

Backstops

Baled straw stacked behind the target will catch wild shots. Also, several layers of burlap, old canvas, or rugs hanging loosely over a horizontal pole or plank 1 or 2 inches wide will stop arrows that miss the target. These materials will last much longer if they can be rolled up and stored between seasons.

Cub Scout Archery Elective Adventures

All Cub Scouts can earn the archery elective adventure for their rank. Information on these electives can be found at www.scouting.org/outdoorprograms.

How To Set Up Outdoor Target Archery Range

Utilize the Cub Scout archery range design layout #315 which can be downloaded at <https://www.scouting.org/outdoor-programs/properties/resources/design-guide-lines>. Set up for wide-open, cleared space.

1. Select the Orientation of the Range

- Avoid shooting into the sun by facing North.
- The ground should be flat and free of obstacles.
- Look for a natural backstop such as a berm to stop arrows. (If there is no berm, provide a minimum of 150 feet of open area behind the targets.)
- The safety zone on the side should be 30-50 feet.

2. Place Range and Safety Lines

- Rope, eco-friendly spray paint or chalk are ways to lay down the range lines outdoors. Follow the guidelines illustrated on the following page.
- Target Line – The purpose of the Target Line is to provide archers a safe place to stand when waiting for their turn to pull arrows from the target.
- Shooting Line – The shooting line is placed close enough to the Target Line to ensure success for the archers to hit the target. This line can be moved back to greater distances as archers become more advanced. The Shooting Line is placed 15-30 feet from the Target Line.
- Waiting Line – Archers stand behind the Waiting Line before and after shooting their arrows. It is meant to act as a safety area between the class and the Shooting Line. The Waiting Line is placed 15 feet behind the Shooting Line.
- OPTIONAL: Controlled Access/Spectator Line – Anyone who wants to watch archers shoot can gather behind this line. This line needs to be placed far enough behind the Waiting Line to prevent distraction from the spectators (at minimum 15 feet)

3. Set Up Targets

- Place targets in front of the natural berm. If a natural berm is not available, place targets in a wide-open space with a minimum safety zone of 150 feet behind the targets.
- Evenly space targets in front of the berm. It is best to place the targets five feet, or two arrow lengths, from target-center to target-center. Evenly spaced targets allow for multiple people to shoot at the same target safely.

4. Place the Equipment

- Bows – The bow rack is placed between the Waiting Line and the Shooting Line. The bows are placed in the bow rack.
- Ground Quivers – Ground quivers are evenly spaced apart on the Shooting Line. Two quivers per target are suggested.
- Arrows – Place arrows in a central location near the bow rack. Once the instructor is comfortable with an archer's skill level, arrows may be placed in each individual archer's ground quiver.



SECTION VI

OTHER RANGE AND TARGET ACTIVITIES FOR ALL PROGRAM LEVELS

The information in Section VI explains additional range and target activities and their related safety concerns. These activities are appropriate for all program levels, from Cub Scouting through Sea Scouting. An extensive resources chapter provides useful information on advancement and recognition and for conducting these activities.

CHAPTER 10: OTHER RANGE AND TARGET ACTIVITIES FOR ALL PROGRAM LEVELS

Many council programs have range and target activities that include slingshots, catapults, balloon launchers, rock-ets, and some other creative devices. These items are fun and, in most cases, seem harmless. However, any type of range and target activity can be dangerous, and if safety precautions are not taken, accidents can happen easily. Great care should be taken that safety is the key factor for any activity where items are shot through the air.

Before starting any range and target activity adults are expected to follow the SAFE checklist and all activities must fit within the age appropriate guidelines of Scouting America.

- Airsoft is not an approved shooting activity for Cub Scouts. It is approved for Scouts BSA, Venturers and Sea Scouts.
- Chalkball/Paintball markers are not approved for Cub Scouts. Scouts BSA, Venturers, and Sea Scouts may only use chalkball/paintball markers to shoot at approved targets—never at another person as part of an approved chalkball program.
- Marshmallow shooters or blowguns or any device where breath is used to expel the projectile, as well as devices that require a straw or similar device in the mouth are not approved.
- All range and target activities must be approved by the council range and target activities committee or a National Camping School certified range activities director.
- The use of catapults or other shooting devices must be approved by the council range and target activities chair or a National Camping School certified range activities director and must use appropriate projectiles. (Pumpkins and projectiles larger than a tennis ball are not authorized).
- A safe range must be provided for any activity, such as catapults, that involves shooting objects or water into the air.
- Proper supervision as described in earlier chapters is required for each of these activities.
- See Appendix for a list of additional unauthorized range and target activities.

Safe Ranges

A safe range must have three things:

1. A safe area
 2. A safe distance
 3. A safe backstop as appropriate for discipline
1. Safe area. Whether inside or outside, be sure the range is set up so no one can accidentally walk in front of the firing line.
 2. Safe distance. Maintain at least 15 feet between the participant and the target.

3. Safe backstop. A backstop designed to keep projectiles from leaving the range. Do not shoot at a hard surface that could cause a ricochet.

Pellet Rifles

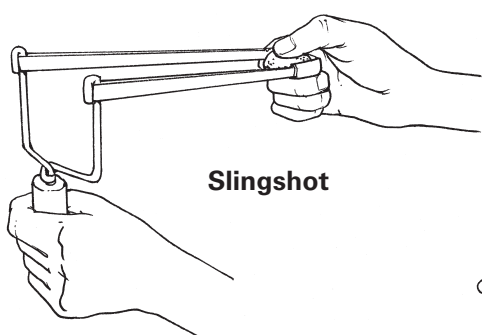
The use of pellet rifles by Webelos and Arrow of Light Scouts is restricted to a long-term camp setting and only qualifies when in compliance with the following requirements. Lions, Tigers, and Cub Scouts are not permitted to shoot pellet rifles.

- The pellet rifle range meets or exceeds Scouting America and National Rifle Association recommendations, including nearby latrine facilities, drinking water, first-aid kit, and emergency communications. See Outdoor Programs/Properties design standards on the Web at www.scouting.org/properties.
- Pellet rifles in good repair are provided and must be appropriately sized for participants.
- If any trigger mechanism fails, the air rifle is immediately removed from service. Documentation of the tests is maintained.
- For Webelos and Arrow of Light Scouts all pellet rifles (CO₂, pump, break barrel, etc.) are limited to single-shot designated for target shooting, velocity of 500 to 540 feet per second, and every levels not to exceed 7.5 joules.
- Safe, separate, and locked storage (can be the same building) is provided for pellet rifles, pellets, and CO₂ cylinders and bulk tanks.
- For supervision requirements and shooting experience see charts in Chapter 1.
- A handwashing station (with soap and cold water) is available for all participants to use upon leaving the firing line.
- THERE IS NO EATING OR DRINKING ON THE FIRING LINE.

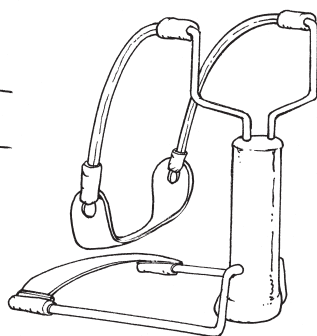
Slingshots and Wrist Braced Slingshots

Using slingshots is an affordable, fun activity in camps and many Scouts have not had previous experience with them. Although exciting and fun, slingshots are not toys. Scouts must understand that they must follow the rules when shooting or they will not be allowed to participate.

Shooting items from slingshots and wrist braced slingshots can be dangerous. For these activities, follow the same safety guidelines and rules as used for BB gun shooting. Always shoot at an approved range following the design guidelines for either an archery or BB gun shooting range.



Slingshot



Wrist braced slingshot

Equipment

Slingshots are usually fork-shaped (Y) and made from very strong and durable wood or aluminum. Broom wood, which is both strong and lightweight and lends itself to carving, is also good for slingshots.

Wrist braced slingshots are a type of slingshot. They are designed to brace against the wrist and therefore seem to be steadier.

Many companies sell excellent slingshots and wrist braced slingshots. Companies that sell BB guns or archery equipment would be good resources for these items. Less expensive slingshots are available in many retail locations. When choosing the slingshot for your camp or activity, consider the experience level of your participants and make sure to obtain devices that are appropriately sized and of good quality.

Targets

Targets for slingshots can be made from a variety of materials, including paper, cans, plastic bottles, and balloons. Paper targets can be homemade or purchased. Cans are excellent as they make a great sound when hit. Cans, plastic bottles, and balloons can be hung from strings or attached to netting. A sample target is shown on page 88. Practice with the slingshot or wrist braced slingshot on a bull's-eye about 2 inches in diameter and with the target 10 feet away, then move the target out to 25 feet.

Slingshot ammunition

*Do not use glass, steel, marbles, rocks or any other hard objects that may ricochet.

*Paintball/chalkball or clay balls are acceptable (must be approved for the range in use.)

*Use of small food items while not prohibited may be suitable for younger Scouts but may attract unwanted wildlife.

Slingshot and Wrist braced slingshot Guidelines

(Instructions are for right eye dominant participants. Reverse instructions for left eye dominant participants where applicable.)

1. A certified BB Rangemaster must be present on the range and oversee the program.
2. A 1-to-1 adult-to-participant ratio must be used for Cub Scout level shooting and a 1:4 adult to participant ratio must be used for all other levels in Scouting.
3. Use a safe shooting range such as a BB gun range or archery range.
4. Properly sized protective eyeglasses or goggles must be worn by participants, adult helpers and rangemaster.
5. Participants must only pick up devices when instructed to do so.
6. Participants must only shoot when instructed and have a clear view of the target and what is beyond it.
7. If a slingshot becomes damaged during use or appears to be worn, this slingshot must be taken off the line and repaired or replaced.
8. Slingshots must only be aimed downrange in a safe direction and not into the air.
9. Participants must stay behind the firing line while shooting is taking place.
10. Participants should point their left foot and shoulder directly at the target with the body turned to the right and turn their head directly toward the target.
11. Center the ammo in the middle of the pouch. Hold the handle firmly in the left hand and pinch the ends of the pouch together with the thumb and index finger of the right hand, encompassing the ammo.
12. Hold the left arm out straight and firm. Draw the right hand back level with right cheek—NEVER TO THE EYE—while holding the pouch securely between the thumb and index finger of the right hand.
13. Aim and release the ammo pouch to shoot.
14. Always practice courtesy and good sportsmanship!

Catapults and Other Shooting Devices

Catapult activities table top size used for STEM or den activities or pioneering projects less than 5 feet in height are the only approved apparatus. NOTE: contests where the object is to shoot a projectile for great distance are not approved. The potential energy for the catapult should be restricted as appropriate.

Catapults using hydraulic, gas, springs, counterweights, or any other gravity propelled device to provide the propulsion are prohibited. Care should also be taken when determining the number or use of rubber band or bungee cords.

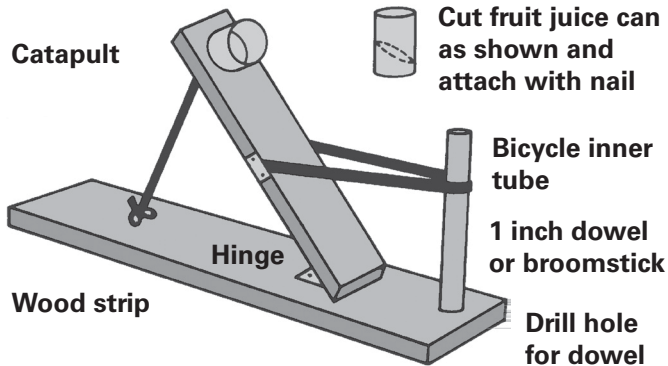
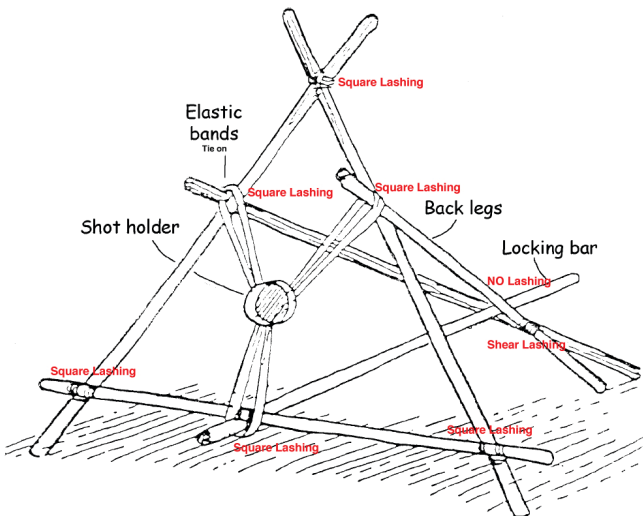


Table top example above (den meetings/STEM activity)



Catapult shown above made with Scout hiking staff.

Ammunition

Water balloons - use small, biodegradable balloons, and fill them no larger than a ping pong ball. Note: When using balloons be sensitive to latex allergies that may be present.

Soft objects - no larger than the opening of a small juice can.

Only soft objects are approved.

The use of any projectile larger than a tennis ball is not approved.

Although specific rules have not been written about each type of shooting activity, these general guidelines apply:

1. Have fun and be responsible!
2. Always wear eye protection.
3. Do not aim any shooting device at a person. Never shoot any projectile, even if it is soft or seems to be harmless, at or near people, animals, or personal property. This includes water balloons.
4. A balloon launcher is not a toy and is made for the sole purpose of launching water balloons. Never launch water balloons at eye level.
5. Do not use any projectiles such as rocks, pebbles, or ball bearings that are hard or that could cause harm.
6. Never use a launcher if there are signs of wear. Check before each use.
7. When using a slingshot or balloon launcher, never put your finger or hand between the tubing connection and the handle.
8. Targets may be made similar to those for archery and BB gun shooting. Creative targets may also be made that relate to the camp theme.
9. The catapults must be launched on range which meets the criteria of a safe range: safe area, safe distance, and safe backstop as appropriate for the size.
10. The range must be established. This can be a temporary area appropriately sized for the activity. Make certain that no one will wander into the landing zone of the projectiles.

Flash Ball

Flash Ball is a shooting sport for shotgun shooting based on clay pigeon shooting and offers a whole new experience. The throwers used can be easily adjusted to fire a number of varied trajectories. Adding a wider range of targets by using more than one machine makes this already addictive game even more challenging. Targets are filled with white non-toxic powder. When the player hits the target, it flashes, producing the same effect as the flash clays used at the Olympics and other major shooting events.

These programs are approved for use by Scouts BSA, Venturers, and Sea Scouts. Supervision for this activity must follow the guidelines for shotgun shooting.

Sporting Arrows

These programs are only approved to be conducted at the council or district level camp and must follow the program outline in the appendix. They require a range layout that is larger in size than a standard archery range, as well as an initial financial investment to secure the needed equipment. The traps are stand-alone machines, and the targets are reusable.

To conduct these programs, the council needs to apply via the NCAP annual intent to operate process. The range layouts, standard operating procedures, and qualified supervision requirements are available at <https://www.scouting.org/outdoor-programs/properties/resources/design-guidelines/>.

Tomahawk Throwing

This is a program for Scouts BSA, Venturers, and Sea Scouts. This program is not approved for Cub Scouts of any rank.

Overview

The purpose of this document is to give an overview of the sport of tomahawk throwing and how it can be adapted to age-appropriate levels for Scouting.

The Sport of Tomahawk Throwing. Tomahawk throwing is increasing in popularity in America. Today, hand-forged tomahawks are made by craftsmen throughout the United States.

Proper equipment selection and range setup. A variety of styles and sizes of tomahawks are available today from several manufacturers. Most craftsmen say that heads will last over a decade when properly cared for, and most favor handles made of hickory. Popular tomahawk styles include:

- French or Blackhawk—With handles about 18 inches long, and heads weighing from 12 to 24 ounces, this style of tomahawk is appropriate for all ages.
- A kiddy 'hawk or junior Blackhawk—A good choice for young Scouts, this style measures about 10 to 14 inches long, and its head usually weighs about 8 to 12 ounces.



Target Styles. Targets can be made in a variety of styles and from many materials. Following are some suitable options.

- Hay bales—These targets are the cheapest to make and easiest to use. Stack three to make a wall, and attach a paper or painted target.
- Soft wood posts—Logs of pine or other soft wood or repurposed telephone poles make great targets. Dig a 24-inch deep hole, and bury the end so it is stable.
- A-frame stands—Stands can be made from 2 x 4s with ends cut at a 45-degree angle and attached like a tripod at the back. Attach a cross-brace to support the weight of the target. The best target rounds are made of palm trees, and are a minimum of 12 inches in diameter and cut 8 to 10 inches thick. Attach them to the back of the stand using heavy screws.
- H-frame stands or backboard stands—These 2 x 4 frame stands are made of plywood and hardtack to stand up to wear and tear. They can be stabilized or installed permanently by staking them to the ground.
- Target wall—Sink two 2 x 12 posts for each target, and install multiple targets or stations for group activities.

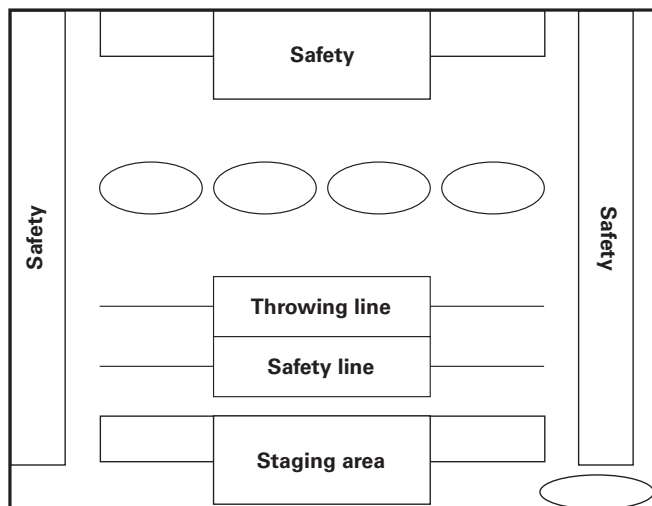


Range setup. All ranges must have adequate space and provide participants a clear line of sight. Each range must have a clearly marked perimeter with signage that alerts bystanders of potential danger. The range must have sufficient buffers all around, with 15 to 25 feet on each side and 25 to 50 feet at the rear of the range.

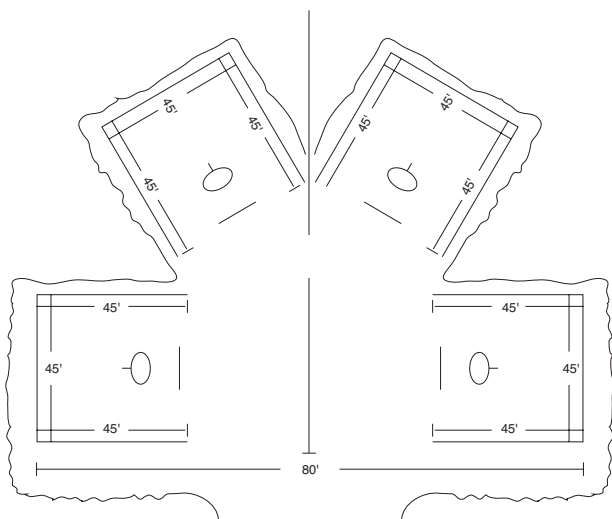
Access to the range should be restricted with a clearly marked gate. The range should have a staging area where safety information and instructions can be shared. Throwing and safety lines should be clearly marked and a minimum of 5 feet from each other. Safety stands or a stack of target rounds on the throwing line can help designate safe observation areas. Each lane should be 5 feet wide to accommodate sufficient throwing space. The distance from the target face to the throwing line is generally 15 feet, but it can be

reduced to 10 feet for younger Scouts. Care should be taken to placethrowers of similar height in lanes beside each other so that a minimum target distance can be achieved with one youth in their throwing lane is not in front of another.

Minimum 6 feet between the throwing line and safety line behind the thrower must be maintained.



Another option is the multi-target range with the participants in the center facing out and targets set around the perimeter:



Range Supervision: Operating the Tomahawk Range

Review Range Safety Rules

- Wear hard-toed shoes while on the rangewhenver possible.
- Move to the throwing line when directed to.
- Participants should check the backstop prior to throwing
- Begin throwing when given the command by the range supervisor.
- Only move forward to retrieve hawks when given the command from the range supervisor.

Sample range commands

Range commands

Range commands are to be spoken clearly, loudly, and in the direction of the participants. All participants are to be given a review of the range commands to be used before any throwing can begin.

The following are the basic range commands.

1. Commence Throwing

Gives permission to the group to start throwing

2. Cease Throwing

Tells all participants to stop throwing immediately

3. Range Open

Declares that the range is considered safe to proceed to throwing stage, but does not give permission to throw.

4. Range Closed

Declares the range is closed for throwing. All throwing must cease. This command may be given with or without a preceding or following Cease Throwing command. It is recommended that Cease Throwing command be given in conjunction with the Range Closed command whenever possible.

5. Retrieve your tomahawks

Tells all participants that they may retrieve their tomahawks from the target area. This command must be coordinated with adjacent ranges to ensure that one group is not throwing while another is retrieving.

6. Exit Range

Tells all participants to exit the range

Stances. (Described for right-handed throwers; reverse for lefties.)

- Side-by-side stance (2 handed throwing - This stance is the safest.)
 - Feet evenly squared with the target
 - Left hand on bottom of handle
 - Right hand on top of left with thumb facing up (helps with rotation)
- Sideways (One handed throwing. This stance is optional; ensure that the draw goes directly overhead and not to the side, which causes the tomahawk to turn.)
 - Body and feet 90 degrees from the target on dominant side
 - Right hand on bottom of handle with thumb facing up
 - Aiming. Site the target with arm extended and tip of 'hawk pointed to desired spot.

Throwing

- Keep elbows and wrists locked.
- Draw tomahawk back over top of head.
- Bring it forward until initial aiming point is reached.
- Release the tomahawk.
- Repeat this process for each 'hawk in the round.

Retrieval.

- Only when the Range Safety Officer allows, walk to the target—do not run.
- Proper technique to remove tomahawks:
 - Place one hand on the target above the handle, and with the other, firmly grasp the handle of the tomahawk.
 - Push down on the handle, and then pull up on the handle.
 - The tomahawk will release from the target.
- General safety during 'hawk removal:
 - Always remove the 'hawk above your head first, and drop it to the ground.
 - If you should stick more than one 'hawk, keep one hand on each during removal from target.
- Once all 'hawks have been removed, pick them up, and grasp the head of the 'hawk in the palm of the hand with blades facing away from the body. (similar to carrying a hand axe)
- Return the 'hawks to the throwing line with the blades facing downrange.

Sticking the Tomahawk

The key to sticking is consistency, which is most easily attained with a tomahawk of sufficient size and weight. Throw the heaviest tomahawk possible without causing strain. For most people, a head weight of about 16 ounces works well.

Common throwing adjustments that can be made.

A “good stick” is when the handle is about 45 degrees in relation to the surface of the block target. This would appear like the upper corner of the blade forming an acute angle with the top of the head. When this takes place the tomahawk will penetrate deeper and is less likely to fall out.

If the 'hawk is over rotating or under rotating when thrown the handle will make contact with the target with the 'hawk handle above or below the 'hawk head. To correct when this happens the thrower could take a small step forward or back before throwing.

Equipment Repair: Replacing Handles and Heads

If you throw tomahawks, eventually you break handles. As skill improves, breakage occurs less often. Tomahawk replacement handles should meet the manufacturer guidelines of your 'hawk and must be the correct size and shape for the 'hawk you are using. For

information about replacement handles see your owner information for your 'hawk.

Sharpening your tomahawk should be done with a file; using a sharpening stone is advisable but optional. Refer to your owner's information or the Scouts BSA Handbook as the process is similar to sharpening an ax.

Sample Tomahawk Competition Rules

From the International Knife Throwers Hall of Fame (IKTHOF)

For a four-round competition

Youth ages 16 and over

Throwers compete in four rounds of three tomahawks from each of five distances, for a total of 60 tomahawks.

Each round consists of 15 tomahawks, three thrown from each distance:

- Three at one spin at a minimum distance of 10 feet
- Three at one and a half spins from a minimum distance of 13 feet
- Three at two spins from a minimum distance of 19.5 feet
- Three at two and a half spins from a minimum distance of 23 feet
- Three at three spins from a minimum distance of 29.5 feet

Maximum 300 points

Youth ages 11–15

Youth follow the same throwing progressions as adults, but with no minimum distance.

Maximum 300 points

Knife Throwing

This program is for Scouts BSA members, Venturers, and Sea Scouts. This program is not approved for Cub Scouts of any rank.

Overview

The purpose of this document is to give an overview of the sport of knife throwing and how it can be adapted to age-appropriate levels of Scouting.

The following information will help you comply with the standards:

- Proper equipment selection and range setup
- Standard operational procedures (age-appropriate instruction and training)

Proper equipment selection and range setup

Getting the right knife

Whichever knife you choose, it needs to have certain qualities. Keep the following factors in mind:

- A sharp point (The knife's blade should be dull for safety.)
- Standard thick enough so it will not bend when it lands
- A solid blade to ensure it doesn't break
- Rounded corners
- Handles without excessive ornamentation
- At least 8 inches to a foot in length
- Only knives manufactured for the purpose of throwing are authorized.

Target Styles. Targets can be made in a variety of styles and from many materials. Following are some suitable options:

- A-frame stands – Stands can be made from 2x4s with ends cut at 45 degree angle and attached like a tripod to the back. Attach a cross-brace to support the weight of the target.
- H-frame stands or backboard stands – These stands are made of plywood or other similar material to stand up to wear and tear. They can be stabilized or installed permanently by stacking them to the ground.
- Target wall – Sink two 2x12 posts for each target.
- Targets can be a thick piece of pine or other soft wood attached to the frame. The wood should be mounted so the grain is going in a vertical direction. This makes it easier for the knife to stick in the wood.
- Another option for the target is to cut a 18"x18" board and attach layers of cardboard to it with tuck tape. As the target is cut up, you can place additional layers of cardboard over the original.
- **DO NOT TARGET TREES**

Range setup. Follow the same setup as listed for tomahawk throwing.

Range supervisor: Running the Knife Throwing

Review Range Safety Rules

- Wear hard-toed shoes while on the range whenever possible.
- Move to the throwing line when directed to.
- Participants should check the backstop prior to throwing.
- Begin throwing when given the command by the range supervisor.
- Only move forward to retrieve knives when given the command from the range supervisor.

How to throw a knife

Stance (Described for right-handed throwers; reverse for left handed throwers.)

- Stand up straight and stay relaxed.
- Keep your right foot forward with the left foot slightly behind it.

Grip

- Grip knives from the handle end.
- **Hammer Grip (1)** – is best for beginners
- **Pinch Grip (2)** – (Commonly used with lighter knives.) Pinch the handle between the thumb and index finger. (An option is to use two or three fingers opposite the thumb.)

Throw

- Grasp the knife.
- Bend your elbow at a 90 degree angle and hold your arm in front of you.
- Move your hand back and up, keeping your eyes on your target.
- When you are comfortable, quickly swing your arm forward and release the knife directly at the target.

Retrieval

- Only when the range supervisor allows, walk to the target – do not run.
- Place one hand on the target, and with the other, firmly grasp the handle of the knife
- Push down on the handle and lift up. The knife should release from the target.

Sample range commands

Range commands

Range commands are to be spoken clearly, loudly, and in the direction of the participants. All participants are to be given a review of the range commands to be used before any throwing can begin.

The following are the basic range commands.

1. Commence Throwing

Gives permission to the group to start throwing

2. Cease Throwing

Tells all participants to stop throwing immediately

3. Range Open

Declares that the range is considered safe to proceed to throwing stage, but does not give permission to throw.

4. Range Closed

Declares the range is closed for throwing. All throwing must cease. This command may be given with or without a preceding or following Cease

Throwing command. It is recommended that Cease Throwing command be given in conjunction with the Range Closed command whenever possible.

5. Retrieve your knives

Tells all participants that they may retrieve their knives from the target area. This command must be coordinated with adjacent ranges to ensure that one group is not throwing while another is retrieving.

6. Exit Range

Tells all participants to exit the range

CHAPTER II: RESOURCES, CERTIFICATES, AND PATCHES

Resources

Archery Trade Association
P.O. Box 70
New Ulm, MN 56073
866-266-2776
www.archerytrade.org

National Field Archery Association (NFAA)
800 Archery Lane
Yankton, SD 57078
605-260-9279
www.nfaa-archery.org

USA Archery
210 USA Cycling Point, Suite 130
Colorado Springs, CO 80919
719-866-4576
www.USArchery.org

Daisy Manufacturing Company
P.O. Box 220
Rogers, AR 72757-0220
479-636-1200
www.daisy.com

Marksman Products
10652 Bloomfield Ave.
Santa Fe Springs, CA 90670
800-822-8005
www.marksman.com

Crosman Corporation
7629 Routes 5 and 20
Bloomfield, NY 14469
800-724-7486
www.crosman.com

National Rifle Association (NRA)
11250 Waples Mill Road
Fairfax, VA 22030
800-672-3888
www.nra.org

Tread Lightly!
800-966-9900
www.respectedaccess.org

Sample Archery Scorecard

These cards may be reproduced for campers in the archery program to keep their score as they strive to improve their shooting skill.

Arrow Score			Hits	End Score	Running Score
Total					

Signature

Arrow Score			Hits	End Score	Running Score
Total					

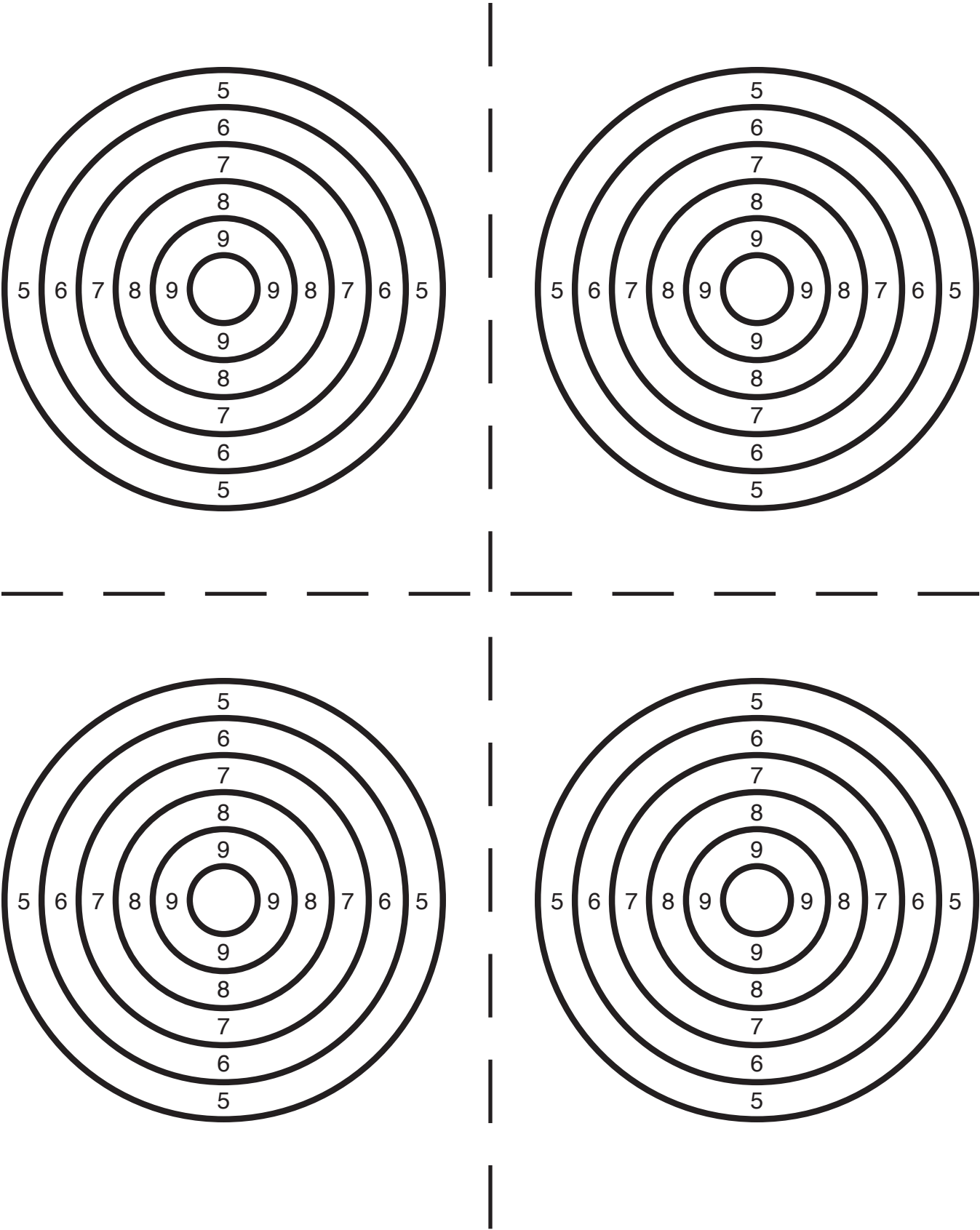
Signature

Arrow Score			Hits	End Score	Running Score
Total					

Signature

Arrow Score			Hits	End Score	Running Score
Total					

Signature

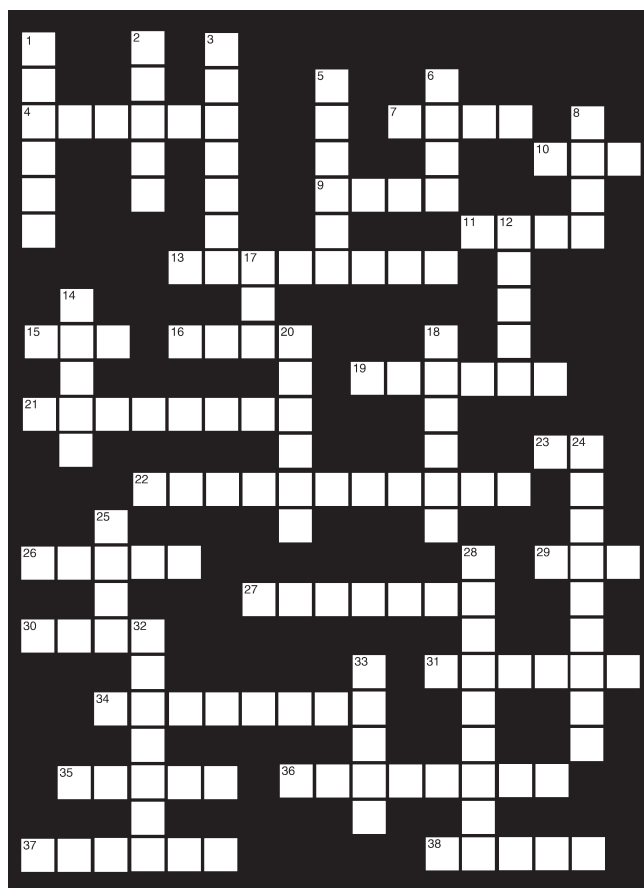


Crossword Puzzle: Air Gun Shooting

So you think you know a lot about air gunning? Here's a crossword puzzle to test your knowledge of air guns, ammunition, and common shooting terms.

If you find yourself stumped, you can check the answers below.

1. You shoot at this.
2. Your point total.
3. The diameter of a bore determines this.
4. An air gun has none. Kick.
5. Soft lead air gun projectile.
6. Olympic participants strive for this.
7. The inside of the barrel.
8. You catch pellets, BBs, and mice in one of these.

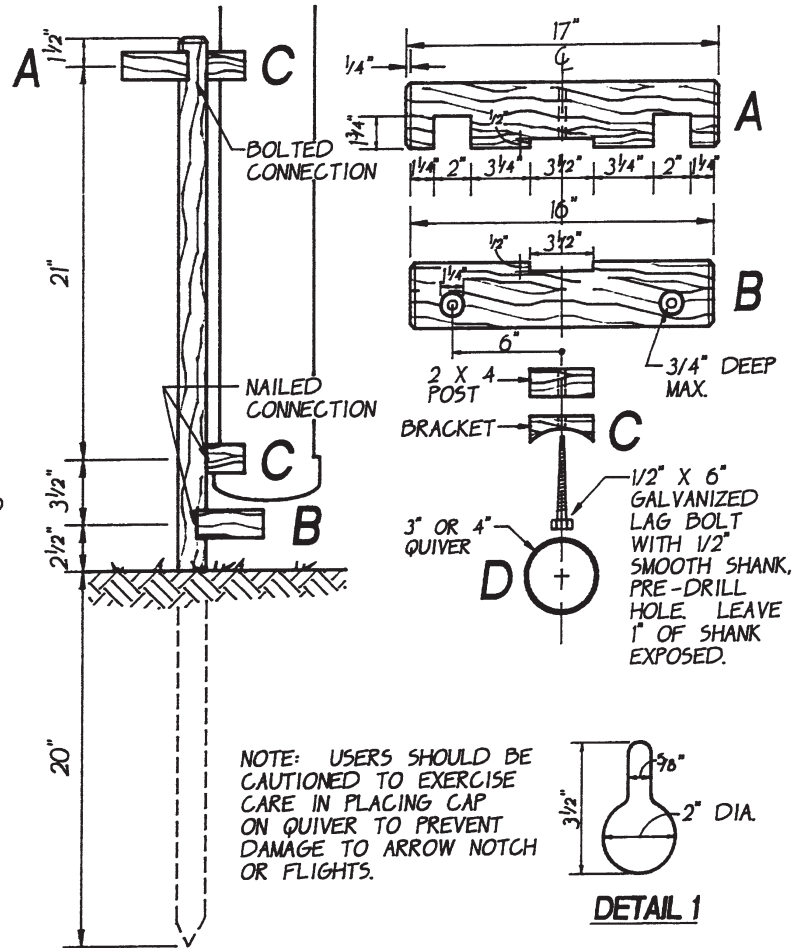
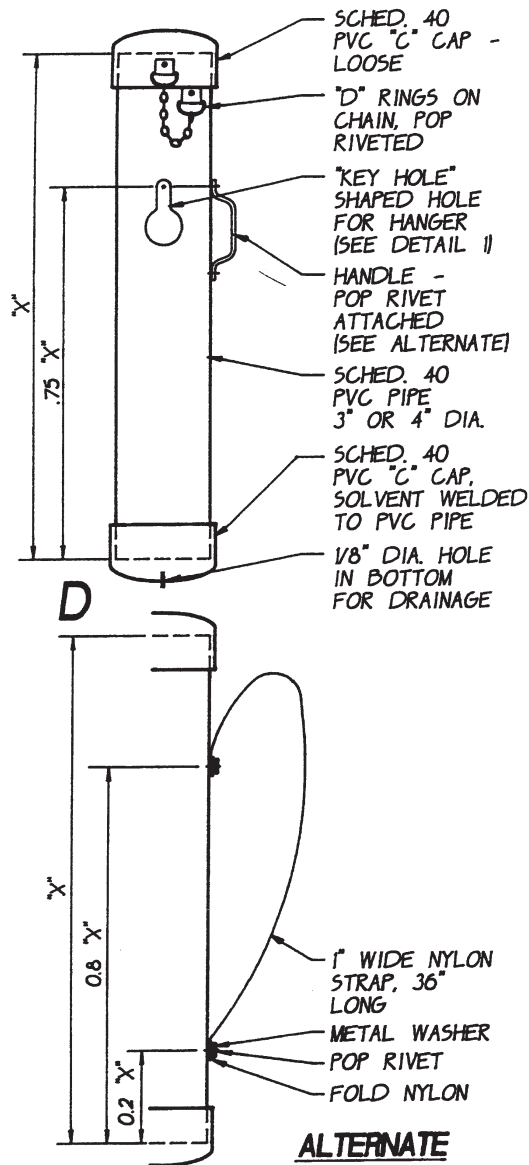


9. You do this when you put pellets or BBs in an air gun's receiver.
10. National Rifle Association.
11. The part by which you hold a pistol.
12. The place where you shoot.
13. Lots of this will make you a better shooter.
14. You hold this type of air gun against your shoulder.
15. The opposite of a miss.
16. A pneumatic air gun requires you to do this to increase air pressure.
17. You do this when you line up the sights on a target.
18. Every shooter's primary responsibility.
19. Handle every gun as if it were this.
20. A hand-held air gun.
21. The highest level of international air gun competition. It takes place every four years.
22. The metal targets that are profiles of rams, turkeys, pigs, and chickens. Use only pellets to shoot them.
23. A perfectly round, copper-covered steel ball fired from some air guns.
24. A new sport that combines the challenges of air gunning and off-road bicycling.
25. This opens a rifle's action.
26. The position air gunners take lying down.
27. The world leader in air gun technology.
A bikathlon sponsor.
28. This type of air gun is powered by a pump system similar to a bicycle pump.
29. The largest silhouette target.
30. This part of the rifle goes against your shoulder.
31. Always point this in a safe direction. The end of a barrel.
32. Squeeze this to make an air gun fire.
33. The grip, comb, and butt are on this part of a rifle.
34. Never shoot BBs at metallic silhouette targets because they might do this.
35. The aiming device on an air gun.
36. The most important component of an air gun range.
37. The projectile travels from the receiver to the muzzle through this.
38. A telescopic sight.

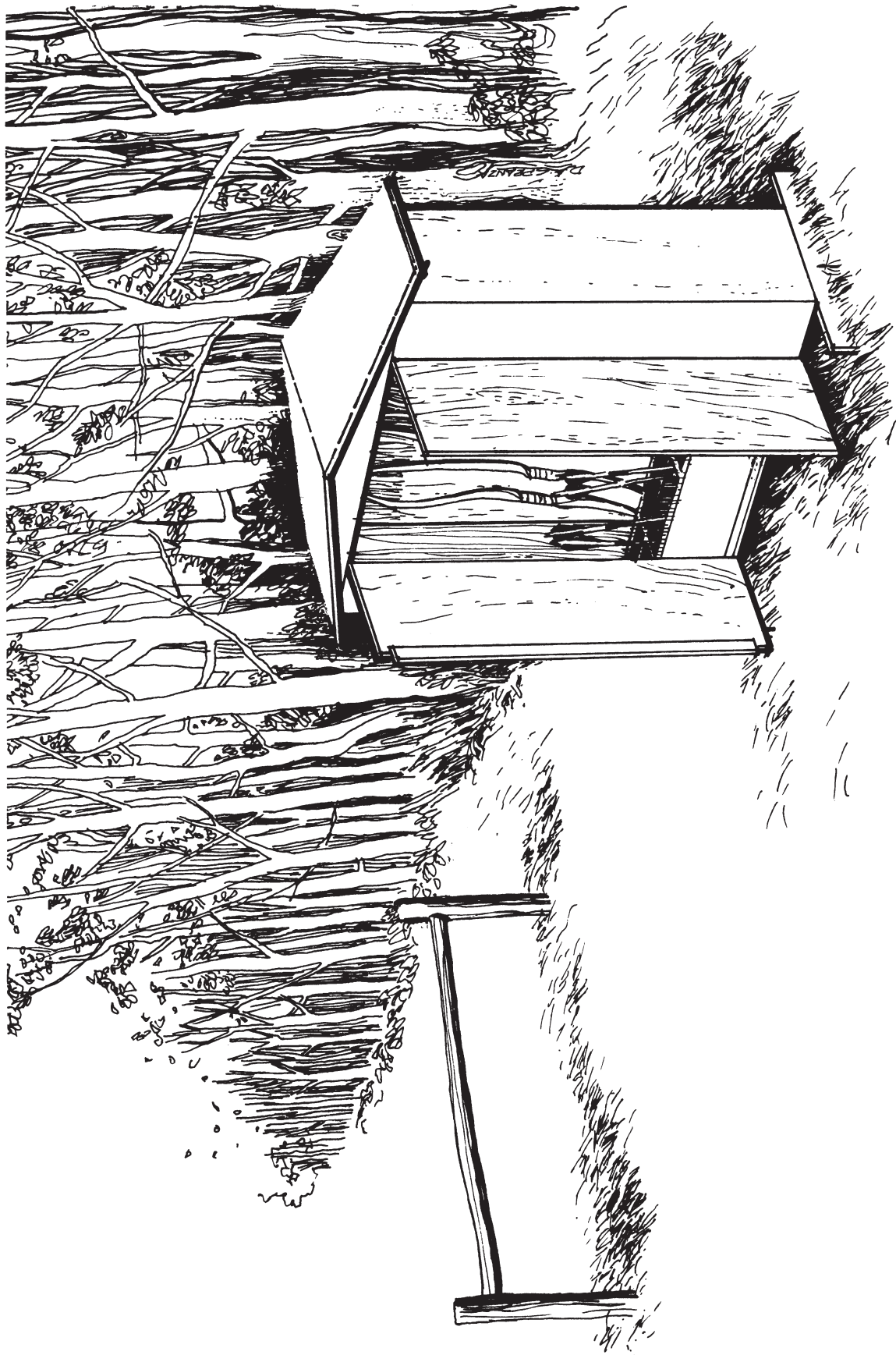
Crossword Puzzle Answers

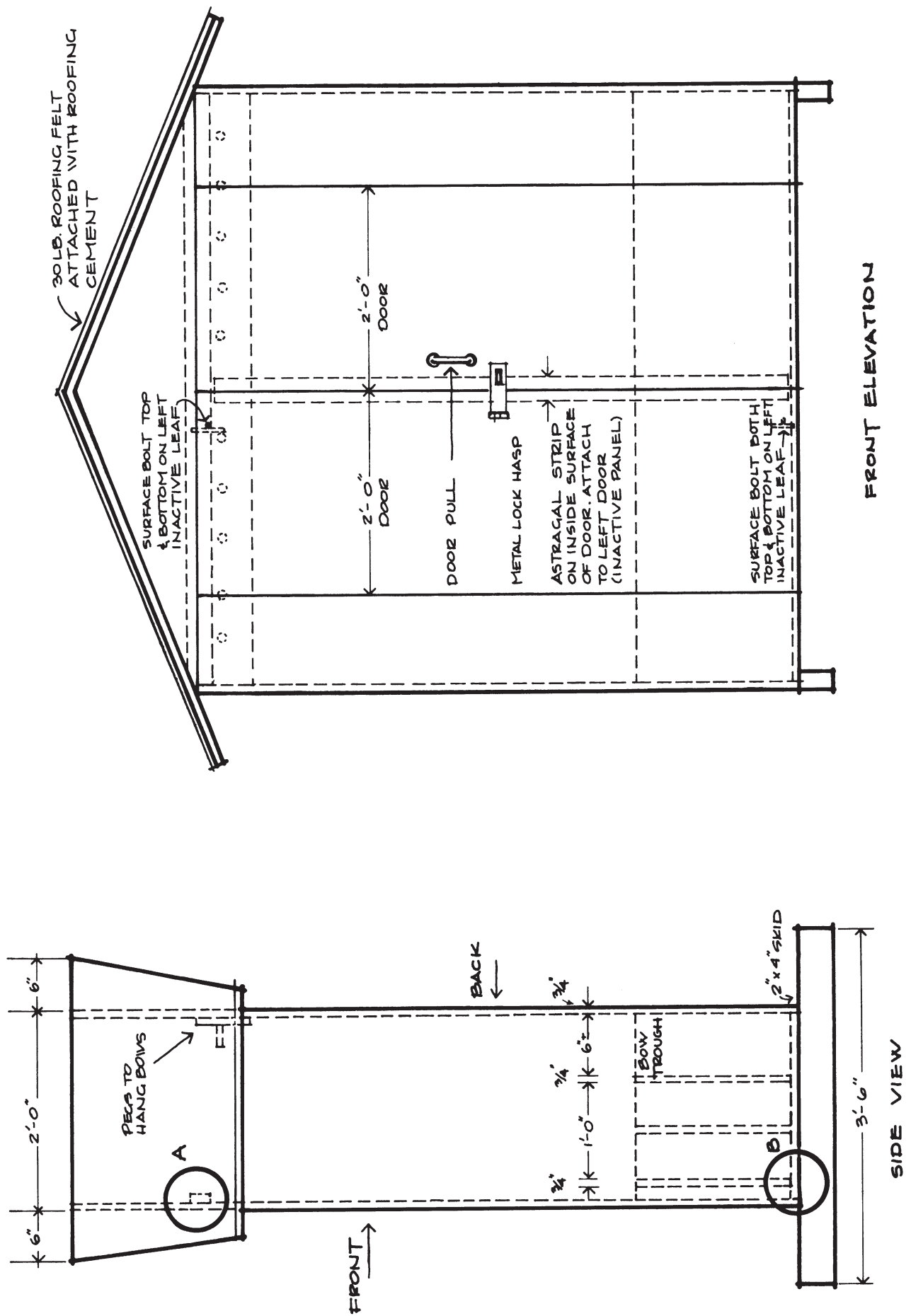
- | | | | | |
|------------|--------------|-----------------|---------------|--------------|
| 1. Target | 9. Load | 17. Aim | 25. Bolt | 33. Stock |
| 2. Score | 10. NRA | 18. Safety | 26. Prone | 34. Ricochet |
| 3. Caliber | 11. Grip | 19. Loaded | 27. Crosman | 35. Sight |
| 4. Recoil | 12. Range | 20. Pistol | 28. Pneumatic | 36. Backstop |
| 5. Pellet | 13. Practice | 21. Olympics | 29. Ram | 37. Barrel |
| 6. Gold | 14. Rifle | 22. Silhouettes | 30. Butt | 38. Scope |
| 7. Bore | 15. Hit | 23. BB | 31. Muzzle | |
| 8. Trap | 16. Pump | 24. Bikathlon | 32. Trigger | |

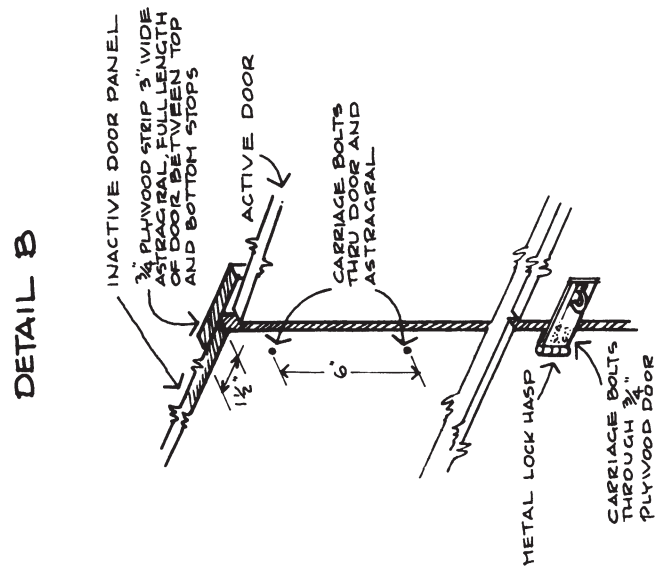
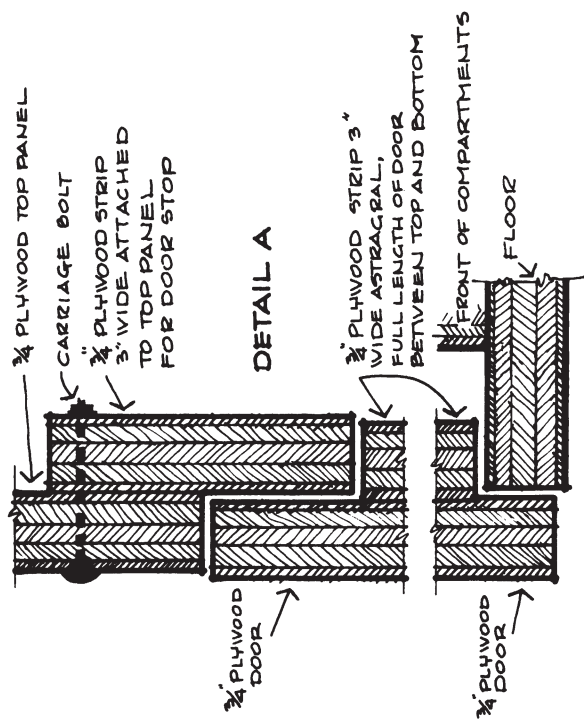
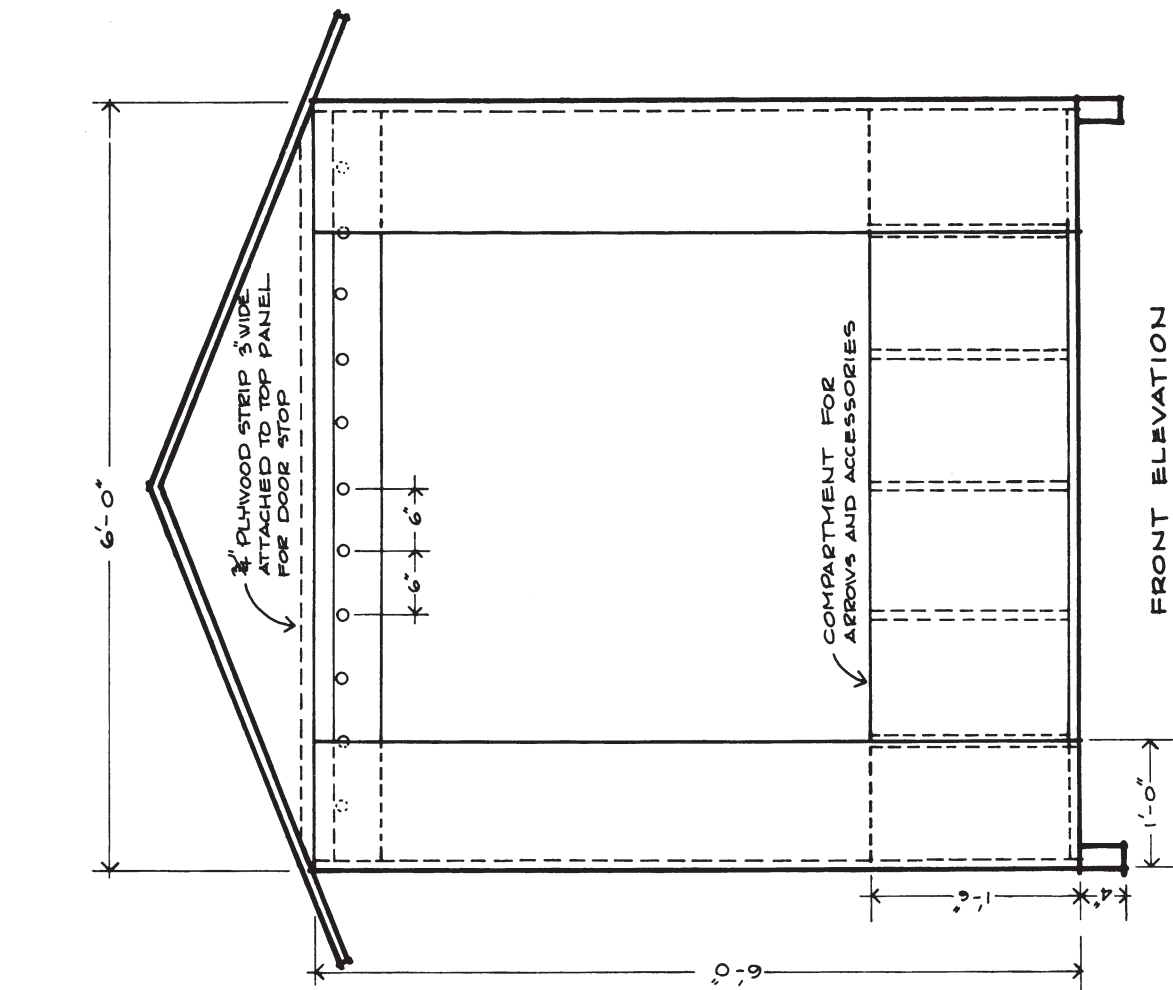
Quiver and Bow Rack

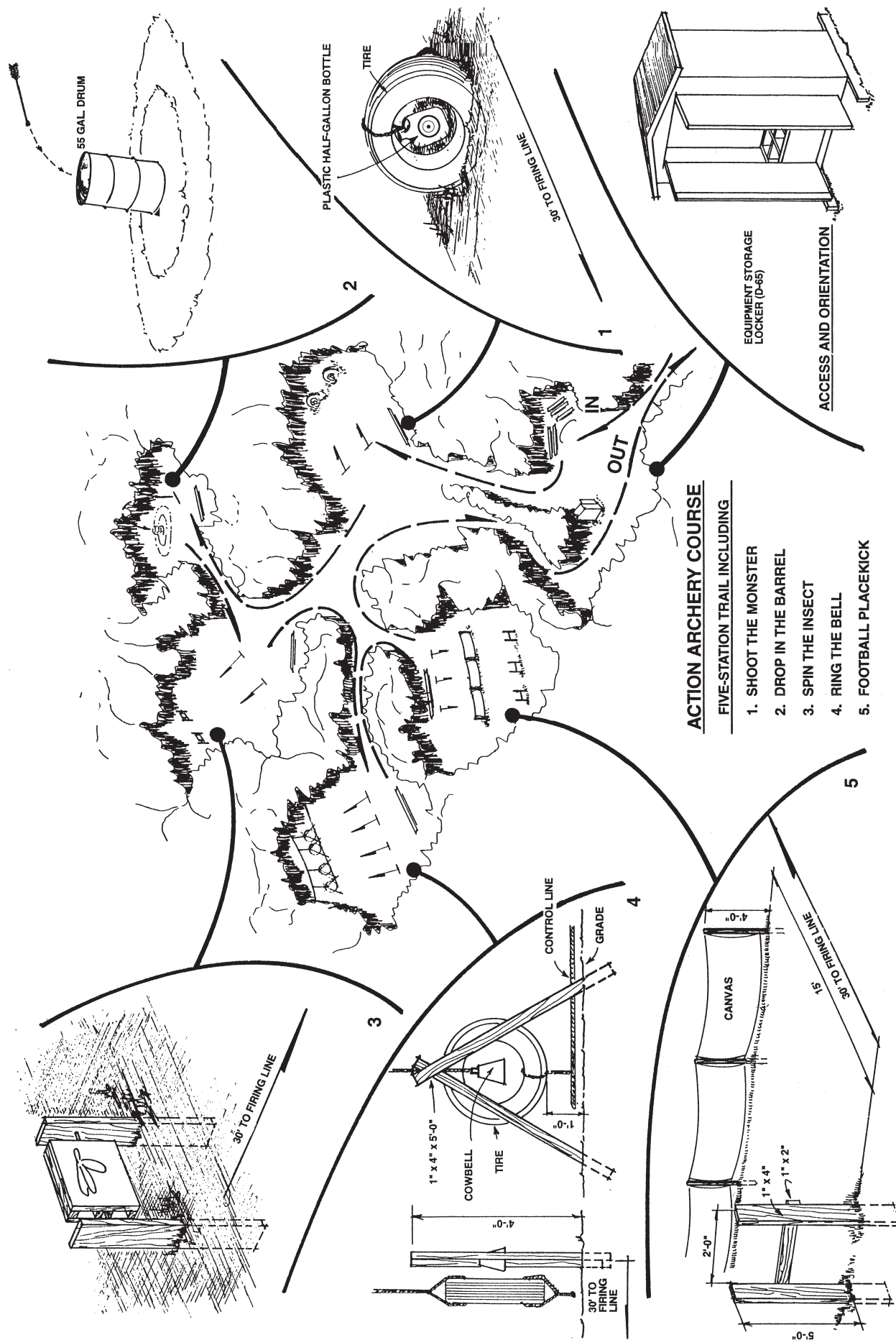


Archery Storage Locker









Glossary

action. A group of moving parts used to cock, compress air (in some models), load, fire, and unload an air gun.

anchor point. The particular spot on the archer's face to which the index finger comes on the draw to give consistency to shooting.

arm guard. A piece of leather or plastic that is worn on the inside of the forearm to protect the arm from the bowstring.

arrow plate. A substance on the side of the bow to give point contact with the arrow.

arrow rest. An extraneous device on the bow to provide point contact; also a resting point.

back. The side of the bow that is away from the shooter.

BB. The term BB is used to describe spherical steel pellets that are .177 inch (4.5 mm) in diameter. However, steel BBs actually have a maximum diameter of .175 inch. BB projectiles for air guns should not be confused with the .181-inch-diameter BB pellets used in shotgun shells.

blunt. A blunt-tipped arrow, often used for small game.

bolt. A hard, metal projectile with a sharp, pointed nose and plastic fins inserted in the rear portion of the projectile.

bore. The inside of the barrel of a gun.

bow arm. The arm that holds the bow (not the string).

bow sight. A device attached to the bow that allows the shooter to sight directly on the target (which cannot be done with the arrow tip except at point-blank range).

bowstring. The string of a bow, usually made of Dacron.

broadhead. An arrow with a sharpened metal tip for hunting live game.

butt. A backstop for holding arrows shot at a target. The shoulder end of a rifle stock.

caliber. The diameter of a projectile, the distance between the lands in a rifled barrel, or the bore diameter in a smoothbore barrel.

cant. The act of holding the bow tilted or slightly turned while shooting.

cast. The distance a bow can shoot an arrow.

CO₂ cylinder or tank. A metal cylinder tank that contains carbon dioxide gas (CO₂). Available in small disposable cylinders for insertion in some models of CO₂ pneumatic air guns; also available in large tanks that are used to charge refillable cylinders and internal gas reservoirs in other models.

cocking lever. The part of a spring-piston air gun used to cock a spring-loaded piston that compresses air at the instant of firing.

compressed CO₂ /air pneumatic gun. A type of air gun using carbon dioxide gas (CO₂) or air that has been compressed and stored in a metal cylinder, or air that is compressed by an external air pump. This type of air gun allows the firing of multiple shots without recharging.

creeping. Letting the string hand edge forward before release.

crest. Paint or decoration on the arrow shaft near the feathers.

cylindrical pellets. A cylindrically shaped air gun pellet that usually has a raised band encircling its base to act as an air seal.

dart. A hard metal projectile with a sharp pointed nose and organic or artificial hair or feathers inserted in the rear portion of the projectile.

dieseling. The ignition and detonation of low-flash point lubricants due to the high temperature generated during the rapid compression of air in a spring-piston air gun.

draw. The acting of pulling the bowstring back into the anchor position.

drawing arm. The arm that draws back the bowstring.

drift. Natural deflection of an arrow from its normal path due to outside factors, such as wind.

end. A specified number of arrows shot at one time (or from one position) before retrieving.

end loop. The part of the string that fits over the bow nock.

face. The part of the bow facing the shooter; also a target face.

fast. An expression used to warn people of arrows being shot.

field archery. A competitive round shot at various distances and laid out like a golf course.

field arrow. An arrow with a field point; used outdoors for field archery, stump shooting, roving, and small game.

finger tab. A tab worn on the drawing hand to protect the fingers and give a smooth release of the bowstring.

fletching. The feathers of the arrow that give guidance to the arrow's flight.

flight. A competitive round of shooting for distance; also, the path of an arrow.

forearm. The part of the arm between the elbow and the wrist.

free style. Shooting with the aid of a bow sight.

front sight. The sight on the muzzle of a gun.

glove. A covering worn to protect the fingers from the string.

grooves. The shallow, spiral cuts in a bore that, together with the lands, make up the rifling in the bore of a barrel.

handle riser. The center part of the bow.

head. The tip or point of the arrow.

hold. The act of gripping the bow; hesitating at full draw.

index. The raised piece of plastic on the nock of an arrow that is in line with the cock feather.

index vain. The arrow feather at right angles to the nock; often of a different color than the other feathers.

instinctive shooting. Aiming and shooting arrows instinctively rather than using the pre-gap or point-of-aim methods or a bow sight.

jerking. Letting the drawing hand jerk too far back as the arrow is released.

kick. The recoil of the bowstring and bow after the arrow is released.

laminate. A composite bow, usually of wood and fiberglass.

lands. The ridges of metal between the grooves in a rifled barrel.

limbs. The two ends of a bow, from the handle riser out.

longbow. A bow with no recurve.

multi-pump pneumatic air gun. A type of pneumatic air gun that uses several strokes of a lever to compress and store enough air in a reservoir or chamber for one shot.

muzzle. The front end of the barrel from which a projectile exits.

NRA. National Rifle Association.

nock. The groove in the end of the arrow in which the bowstring fits; also, the groove at each end of the bow which holds the bowstring in place.

nock locator. The material on the bowstring used to indicate the exact nocking point for the arrow.

nocking point. The marked place on the bowstring where the arrow nock is placed before drawing and releasing.

over-bowed. Using a bow that is too heavy for the individual.

overdraw. Drawing the arrow back too far so that the tip passes the face of the bow. This is a dangerous practice.

pellet rifle. A gun that propels a projectile through its barrel by use of compressed air or carbon dioxide gas (CO₂). Gunpowder is not used in this type of gun.

plinking. Informal shooting at a variety of targets.

pneumatic air gun. A type of air gun that uses stored compressed air. Divided into two subcategories: single-stroke or multi-pump pneumatics and air pneumatics.

point. The tip on the end of the arrow.

point-blank range. The only distance from the target at which the point-of-aim is right on the target center.

point-of-aim. A method of aiming using a point, usually in front of the target, with which the point of the arrow is aligned; allows for trajectory of the arrow.

pre-gap (pre-draw gap). A method of aiming.

projectile. A body projected forward such as a bullet from a gun.

quiver. A container to hold arrows; can be ground, back, side, or pocket type.

range officer. A trained, certified, on-site adult who directs the operation of a range program in a shooting sport.

rear sight. The sight nearest the breech of a gun.

recurve. A bow that is curved on the ends.

reflexed bow. A bow with limb ends curving toward the back rather than toward the face of the bow.

release. The act of letting the bowstring slip off the fingertips.

rifling. Spiral grooves and lands in the barrel bore that provide a stabilizing spin to a projectile so that it will be more accurate in flight.

roving. An outdoor game played by two or more in which natural targets such as stumps, trees, or bushes are selected for accuracy competition.

self arrow. An arrow made entirely of one piece of wood.

self bow. A bow made entirely of one piece of wood, as opposed to other types of bows such as laminate.

serving. The thread wrapped about the bowstring to prevent fraying of the string.

shaft. The middle of an arrow; an unfletched arrow.

shelf. The place on the bow where the arrow rests.

shooting sports director. The person who has overall responsibility for the operation of the shooting program for council camps and activities.

sight alignment. The relationship between the front and rear sights, where the shooter sees that the post bead, disc, or front sight device is aligned properly with the rear sight.

sights. Mechanical, optical, or electronic devices used to align the axis of the barrel on the target.

sinking. The gradual loss of a bow's power.

single-stroke pneumatic air gun. A type of pneumatic air gun that uses one stroke of a lever to compress and store enough air in a reservoir or chamber for one shot.

small of stock. The narrow part of a rifle stock.

smoothbore. An informal name for a gun that has a smoothbore barrel.

smoothbore barrel. A barrel that does not contain rifling.

solid bow. A common reference to a bow that is made entirely of fiberglass or plastics.

spring-piston air gun. A type of air gun that uses a manually operated lever or other device to cock a spring-loaded piston, which compresses air at the instant of firing. The air that propels the projectile is not stored in a reservoir prior to firing.

stance. A standing position assumed when shooting an arrow.

stock. The wooden or metal piece to which the barrel or mechanism of a rifle are attached.

string. Preparing a bow for shooting; also, the bowstring.

string fingers. The three fingers used to draw back the bowstring.

string height. The distance between the bow and the bowstring at the handle.

strung bow. A bow that is ready to shoot.

target archery. A competitive round shot at affixed distances in an open area.

target arrow. A lightweight arrow with a target point.

throwing. Moving the bow hand to the left upon release.

understrung. A bow with a bowstring that is too long.

vane. A plastic fletching on an arrow.

weight. The amount of effort (in pounds) required to draw the bow a given length (normally measured at 28 inches).

weight in hand. The actual weight of the bow.

windage. The amount of drift in the flight of an arrow caused by wind.

wobble. The erratic motion of a flying arrow.

APPENDIX 6 - PROHIBITED ACTIVITIES

To review all Scouting America unauthorized activities,
please visit <https://www.scouting.org/health-and-safety/gss/gss07/>