



Hamilton County

4-H Archery

Name: _____

Hamilton County 4-H
UT-TSU Extension Hamilton County
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Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development.
University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating.
UT Extension provides equal opportunities in programs and employment.

Contents:

- State 4-H Archery Jamboree Competition Rules and Guidelines
- State 4-H Shooting Sports General Rules for State 4-H Jamborees
- 4-H Archery Member Manual
- Excerpts from Tennessee 4-H Shooting Sports Project Guide - Archery Section
 - 11. The Importance of Safety
 - 12. Archery Equipment



**Tennessee 4-H Shooting Sports
State 4-H Archery Jamboree
Hyder-Burks Agricultural Pavilion, TTU, Cookeville, TN
(Recurve/Compound) April 10, 2026 – 10:00 AM CST
(Genesis) April 11, 2026 – 8:00 AM CST
Registration Deadline – March 27, 2026**

(2026 Revisions in Red)

GENERAL ARCHERY COMPETITION RULES AND GUIDELINES

There will be three different divisions in the archery competition. Each division will have awards for the top ten individual shooting scores in each age class.

DIVISIONS –

1. Genesis Compound
2. Recurve
 - A. Basic
 - B. Olympic
3. Compound
 - A. Hunter
 - B. Open

AGE CLASSES – There will be three age classes for each division: Junior (4-5 grades), Junior High (6 - 7 grades) and Senior High (8 -12 grades). (Grade as of January 1, 2026)

ENTRY FEE – There is a \$20.00 fee per entry

ENTRY LIMIT – There is no limit to the number of entries per county.

CHECK-IN – Begins at 9:00 AM day 1 and 7:00 AM day 2 in the lobby and continue throughout the day (participants arriving 45 minutes to an hour before the assigned flight time, coaches will check-in teams and sign the understanding and compliance agreement of the event rules. All equipment will be inspected and subject to spot checks on the range. Equipment check will be on the right side of the mezzanine when entering the building through the check-in and begin 30 minutes prior to the flight time.

COACHES MEETING – Coaches will meet briefly at equipment check 45 minutes before each flight, after this time any questions should be directed to the CRO, when appropriate, or the Superintendent (typically the State Coordinator). Also, a coaches' forum will be conducted immediately following the event or awards as time allows.

SCORING – All scoring will be individual only.

QUALIFYING FOR THE STATE 4-H INVITATIONAL – The top 50 percent of individuals of the 8-12 grade from the Recurve and the Compound Divisions (**sub-divisions not counted separately**), will be invited to the State 4-H Invitational to be held **at the end of Summer 2026**. In addition to the top 50 percent individuals, any athlete who scores at least 130 in Recurve or 260 in Compound will also be invited to the Invitational. The State 4-H Invitational will be the qualifying match for the National 4-H Shooting Sports Championships in June **2027** in Grand Island, Nebraska (not all competitors may be eligible for Nationals).

EQUIPMENT – Check the equipment standards chart for approved equipment. Also, all equipment must be checked at the assigned time by a range official prior to competing on the day of the event. Equipment components that are not permitted must be removed or the archer must change sub-divisions to compete. Any bow determined unsafe to shoot will not be permitted. If an equipment malfunction occurs that constitutes a breakdown, “breakdown” must be called and the chief range officer/head match official notified immediately. The chief range officer/head match official must confirm the breakdown, then the athlete will have 30 minutes to repair the equipment and resume shooting.

SKILL-A-THON – Like other 4-H projects, shooting sports has a subject matter base. It has strong links to natural resources, wildlife, outdoor recreation, and safety. Core concepts stress safety, ethical development, and life-time recreational skills. To reflect these concepts, there will be a Skill-a-thon test given that will cover archery safety, equipment and service, as well as 4- H archery rules and guidelines. This Skill-a-thon is MANDATORY for all archers but will not affect invitational qualification for 8-12 grade participants. This Skill-a-thon will be administered in an online format. This Skill-a-thon will be taken in the county group prior to the competition. The system will open one month before the contest and will close the Friday before the Jamboree date.

COACHES DURING EVENT – 1 certified coach per 5 participating members will be allowed in the coaching area. Please reference General Coaching Rules.

Awards – Awards will be given to the top individuals in each age class per division including subdivisions. In addition, county team awards will also be given in each age class per division including subdivisions. County team awards will be given by adding the top three scores from each county. Skill-a-thon will be awarded separately by age class. Awards will be given on the day of the event following the completion of shooting and score calculations. Scores will be posted online by noon, on the Wednesday after the event. Any awards not picked up at the presentation on that day will be sent to the agents in participating counties to distribute.

EQUIPMENT STANDARD FOR GENESIS DIVISION

	PERMITTED	NOT PERMITTED
GENESIS	"Original Genesis" bows; solid color or color pattern bow with a solid taped sight window with no modifications or accessories other than a wrist sling and/or “finger savers”, the Morrell Manufacturing draw weight Gauges and new NASP competition rest.	Brass nocks; Genesis Mini Bow; Genesis Pro; Any bow with a color pattern or markings in the sight window (this includes stickers, decals, paint or tape lines, etc.).
ARROWS (must be supplied by the athlete)	30-inch 1820 aluminum arrows, 7075 alloy, UNI Bushing and Easton press-fit 'G' nock (or NASP 1820 glue-on nocks), target point with 2.8-inch vanes	Any other arrows, bushings or nocks not listed.

Open Compound division will be open to any compound bow, including Genesis. Arrows for all divisions must be provided by the participant. All equipment will be subject to inspection. Any bow that uses pulleys or cams is deemed a compound.

EQUIPMENT STANDARD FOR COMPOUND AND RECURVE DIVISIONS

	PERMITTED	NOT PERMITTED
RECURVE Basic	Finger protection such as a tab, finger stalls, or a shooting glove; shooting off the shelf or flipper style rest; the shelf may be covered by fur or similar materials, fixed pin sight; 60 lb. maximum draw weight.	String peeps and mechanical release aids; draw keeps; sight lens or lens kits; overdraw rests; no electronic components; stabilizers; glass of any type in sight.
RECURVE Olympic	One adjustable sight pin or multiple hunting style sight pins may be used; clicker and kisser buttons permitted; front and rear stabilizers; V bar stabilizers (given provision that v's extend forward and back and not to the sides); Participants may have as many sight pins as deemed necessary; Torque compensators are permitted. 60 lb. maximum draw weight.	String peeps and mechanical release aids; draw keeps; sight lens or lens kits; no electronic components; glass of any type in sight.
COMPOUND Hunter	Fixed pins, front stabilizers 12" or less and rear stabilizers 12" or less (measured from point of attachment); release aids; string peeps; 60 lb. maximum draw weight.	Overdraws may not place the arrow rest further than 6 cm from the pivot point of the bow; No electronic auto-adjusting sights; sight lens or lens kits.
COMPOUND Open	Release aids; String peeps, optical sights; spirit levels; front and rear stabilizers; V bar stabilizers (given provision that v's extend forward and back and not to the sides); 60 lb. maximum draw weight. Multiple pin sights allowed.	Overdraws may not place the arrow rest further than 6 cm from the pivot point of the bow; No electronic auto-adjusting sights.
ARROWS for all disciplines – must be supplied by athlete	Must meet minimum standards for their respective division. Arrow points must be the same diameter as the arrow shaft.	No arrows larger than 27/64ths in diameter

DIVISION RULES AND GUIDELINES

1. Genesis Compound

- Target: 80 cm faces, 5-color face
- Target Height: Target will be placed on the floor
- Distance: 10 and 15 meters in that order
- Course of Fire: 3 ends of 5 arrows each from 10 meters 3 ends of 5 arrows each from 15 meters Athletes will shoot two to a target at the same time. Each athlete will have five arrows that are unique to that athlete, for scoring purposes. Under no circumstances is "sky-drawing" or "dry firing" permitted. Athletes will receive one warning for "sky-drawing," if there is a second occurrence the athlete will be dismissed from the range and forfeit any remaining end(s).
- Time Limit: 4 minutes per 5 arrow end
- Scoring: 10-1 from the center outward. Inner 10's (10x) will be recorded, but no additional points will be awarded. Tie breaks will be determined by number of inner 10's. If still tied, breaks will be determined by number of inner 10's at the longer distance. If still tied, breaks will be determined by scoring of an additional end at the longer distance. If still tied, breaks will be determined by the score of a single arrow from the longer distance until tie is broken. Any arrow that bounces off the target will be reshot.

2. Recurve (Basic & Olympic)

- Target: 80 cm faces, 5-color face
- Target Height: Target will be raised in accordance with FITA standards (130 cm or 51.2" +/- 5 cm or 1.969")
- Distance: 15 and 20 meters in that order (Junior and Junior High Classes)
20 and 30 meters in that order (Senior Class)
- Course of Fire: 3 ends of 5 arrows each from 15 meters (20 meters for Senior High Class) 3 ends of 5 arrows each from 20 meters (30 meters for Senior High Class) Athletes will shoot two to a target at the same time. Each athlete will have five arrows that are unique to that athlete, for scoring purposes. Under no circumstances is "sky-drawing" or "dry firing" permitted. Athletes will receive one warning for "sky-drawing," if there is a second occurrence the athlete will be dismissed from the range and forfeit any remaining end(s).
- Time Limit: 4 minutes per 5 arrow end
- Scoring: 10-1 from the center outward. Inner 10's (10x) will be recorded, but no additional points will be awarded. Tie breaks will be determined by number of inner 10's. If still tied, breaks will be determined by number of inner 10's at the longer distance. If still tied, breaks will be determined by scoring of an additional end at the longer distance. If still tied, breaks will be determined by the score of a single arrow from the longer distance until tie is broken. Any arrow that bounces off the target will be reshot.

3. Compound (Hunter & Open)

- Target: 80 cm faces, 5-color face or Athlete's may request a 5-Spot Target
(5- Spot Target must be requested when registering in SUPER)
- Target Height: Target will raised in accordance with FITA standards (130 cm or 51.2" +/- 5 cm or 1.969")
- Distance: 15 and 20 meters in that order (Junior and Junior High Classes)
20 and 30 meters in that order (Senior Class)
- Course of Fire: 3 ends of 5 arrows each from 15 meters (20 meters for Senior High Class) 3 ends of 5 arrows each from 20 meters (30 meters for Senior High Class) Athletes will shoot two to a target at the same time. Each athlete will have five arrows that are unique to that athlete, for scoring purposes. Under no circumstances is "sky-drawing" or "dry firing" permitted. Athletes will receive one warning for "sky-drawing," if there is a second occurrence the athlete will be dismissed from the range and forfeit any remaining end(s).
- Time Limit: 4 minutes per 5 arrow end
- Scoring: 80 cm face: 10-1 from the center outward. Inner 10's (10x) will be recorded, but no additional points will be awarded.
5-Spot: One arrow per spot, 10-9 from the center outward (white rings= 10, blue rings= 9), with any arrow missing the scoring rings awarded the score of 0. Inner 10's (10x) will be recorded, but no additional points will be awarded.
Tie breaks will be determined by number of inner 10's. If still tied, breaks will be determined by number of inner 10's at the longer distance. If still tied, breaks will be determined by scoring of an additional end at the longer distance. If still tied, breaks will be determined by the score of a single arrow from the longer distance until tie is broken. Any arrow that bounces off the target will be reshot.

12/15/25



**Tennessee 4-H Shooting Sports
General Rules for the State 4-H
Jamborees
See the Specific Jamboree Rules for More Information
(2026 Revisions in Red)
GENERAL RULES**

All rules and guidelines are subject to change. The Tennessee 4-H Shooting Sports State 4-H Jamborees follow all guidelines for Tennessee 4-H events. 4-H is the youth program of the University of Tennessee Extension and Tennessee State University Extension.

Participants are to register through their County Extension Office.

By entry in these events, the County Extension Office and the county 4-H Shooting Sports coordinator is verifying that the youth entered are knowledgeable and proficient in the safe use of the equipment and the fundamentals of the event. Match and/or range officials may dismiss or disqualify a participant if he/she believes the participant does not demonstrate the basic proficiency, knowledge, and integrity required.

- 1 **4-H membership** - All bona fide, active, 4-H Shooting Sports members are eligible to compete in 4-H Shooting Sports events, subject to limitations imposed by the specific event and the rules for active membership instituted by Tennessee 4-H. **4-H Shooting Sports members are those 4-H youth who have been under the direction of a Certified 4-H Shooting Sports Instructor.** Contact your County UT Extension office for 4-H membership.
- 2 **Disciplines offered** - The disciplines offered for competition will be Air Pistol, Air Rifle, Archery, BB and Shotgun.
- 3 **Age Classes** - See specific jamboree rules
- 4 **Entry Limit** - See specific jamboree rules
- 5 **National 4-H Competition Qualifying** - See specific jamboree rules
- 6 **Official Entry** - Pre-registration is required to participate in this event. An entry fee is also required. **See specific jamboree rules for deadlines. Participants are to register through their County Extension Office. County Extension Office must register through SUPER.**
- 7 **Fee Schedule** - A fee of \$20.00 will be assessed for every entry in archery, BB rifle, air pistol, **smallbore rifle**, and air rifle; and a fee of **\$55.00** will be assessed for every entry in Shotgun. See specific jamboree rules for deadlines.
- 8 **Range Personnel** - The scorers and range safety officers will be designated by the specific Jamboree Committees.
- 9 **Individual and team participation** - See specific jamboree rules
- 10 **Medical Consent Form & Adult Supervision** - It is the responsibility of each County to have the appropriate health consent and release forms for each of their participants and adult supervisors (600A,

600B, or 600C, see link for forms https://4h.tennessee.edu/Pages/forms_materials.aspx). An adult supervisor/coach/manager should be present at the event site, with immediate access to the forms, any time their youth are participating in any 4-H Shooting Sports event. The Tennessee State 4-H Program is not responsible for medical authorization and health history of the participants.

- 11 **Awards** - See specific jamboree rules
- 12 **Safety** - Safety must be the number one priority of range personnel, participants, and spectators. Standard accepted safety rules will be followed at all times, special safety considerations will be announced at each venue. The Discipline Superintendent, Range officers, or other event staff may dismiss anyone from the range for unsafe behavior. The score may be forfeited, participant disqualified, or spectators barred at the discretion of the range staff.
- 13 **Eye & Ear Protection Requirement** - Adequate eye protection (shooting glasses, safety glasses or safety goggles, or hardened prescription glasses) is required for all competitors in the air pistol, **air rifle**, **BB rifle**, **smallbore rifle**, and shotgun disciplines. Hearing (ear) protection is required for **smallbore rifle and** shotgun. Electronic hearing protection is acceptable; however, capability of streaming music or voice must be disabled. (Bluetooth or corded types). Coaches or spectators on or near firing lines are subject to the same requirements
- 14 **Coaches** - Each County shall designate one coach per firing line, unless otherwise stated in the specific competition rules. This coach is the adult permitted to discuss procedures, ask questions, or advocate for his/her team with range officials. This coach should be designated on the entry form.
- 15 **Coaching** - As a general rule, limited coaching is permitted, however please see the specific discipline competition rules for specific coaching rules that may differ (i.e. BB rules). Coaching must never disturb other participants. Each County is limited to 1 "coach" per firing line, unless otherwise stated in the specific competition rules. A coaching line will be established on each range -behind the athletes area and firing line and separate from the spectator area. Except during preparation time, coaches are to stay behind the firing line and in the coaching area. Coaches may assist the athlete during prep time only. Once shooting for record begins, no coaching is permitted. Any request for coach assistance must be initiated by the athlete, the coach may not initiate contact with the athlete. If the need for encouragement of an athlete arises, coaches may ask the line officer to have their pupil come back to talk, but the coach is not to initiate contact with the athlete. Coaching related subjects may **NOT** be discussed during one of these encouragement talks. The athlete will put down their equipment, make it safe, leave the line, and then go talk to their coach. Coaches may ask the line officer to have their pupil come back to talk but is not to initiate contact with the athlete. Coaches may not handle firearms or equipment after the match begins nor advance to the firing line unless authorized by the range officer. A coach may set up his/her own spotting equipment.
- 16 **No Smoking** - No smoking is permitted on or near the firing lines or in any situation where the smoke constitutes an interference to athletes. Smoking by minors is prohibited by law and is not permitted on the grounds at any time.
- 17 **Alcohol Policy** - No alcoholic beverages may be consumed on the grounds. Violation of this policy is grounds for ejection.
- 18 **Dress Code** - Participants are expected to dress appropriately. Team uniforms or shirts are encouraged but not required. Both young people and adults should wear attire appropriate for the weather while remaining modest and socially acceptable. Participants are required to wear shoes that completely cover the foot on all ranges. Crocs or similar shoes are not acceptable. Clothing with sexually suggestive wording or graphics; and alcohol or tobacco advertisement is not appropriate. Range officials have the final word concerning the dress code and may announce or address specific cases. All athletes and coaches should remember that they may be having photographs taken or be asked to interview for the media. Remember that you represent all of 4-H. Make it a positive image.

- 19 **Behavior and Sportsmanship** - All participants and spectators are expected to demonstrate the highest level of sportsmanship, supporting the objectives and ideals promoted by 4-H. Athletes or coaches will render aid and/or testimony if asked to do so by any match official. All participants and observers are expected to conform to the Code of Conduct as supplied, not only to the letter, but to the intent.
- 20 **Rules - Knowledge of procedures and rules** - This event may also follow guidelines set forth by a National Governing Body (NGB). Where there is conflict regarding these rules and rules set forth by the NGB, these rules supersede. It is the athletes' and coach's responsibility to read the NGB and event rulebooks and understand the procedures used in each event and comply with the rules and standards of the events. Questions are encouraged to clarify any areas of misunderstanding or ignorance. Ignorance of the rules does not obviate their existence. Athletes are responsible for knowing the rules and staying within them. Learning the rules of the event is part of the educational process for 4-H Shooting Sports participants.
- 21 **Physically Disabled Athletes** - A athlete who because of physical disability cannot fire from one or more of the prescribed shooting positions outlined in these rules, or who must use special equipment when firing, is privileged to petition to the Discipline Superintendent for permission to assume a special position or to use modified equipment or both. This petition will be in the form of a written request from the person concerned to the Committee (discipline superintendent) outlining in detail the reasons why the special position must be assumed or the special equipment must be used. The petition will be accompanied by pictures of the athlete in the position desiring approval and, if special equipment is required, the picture will show how this equipment is used. The petition and all pictures must be furnished in exact duplicate. The petition must be accompanied by a medical doctor's statement if the physical disability is not completely evident in the pictures submitted.
- a. Each petition will be reviewed by the Tennessee 4-H Shooting Sports State Committee. The committee may require additional or supplementary statements or pictures. After review the Discipline Superintendent will be instructed by the committee to issue special authorization to individuals who submit petitions and pictures which have been approved. Such certificates will have necessary pictures attached.
 - b. Athletes who have received special authorization will be required to carry them when competing and to present the certificate when requested by officials of the match. In the case of a protest involving the position or the equipment used by such a athlete, the range officials will compare the questioned position or equipment with the certificate and photographs presented by the athlete.
- 22 **Challenges** - Athletes only, may review their own targets and challenge the scoring. Once targets have been scored, they will be available for review by athletes for a period of 30 minutes unless otherwise posted. Upon completion of that time period the scores may no longer be challenged. Challenges must be accompanied by a fee of \$1 per hole being challenged. A jury (not including the original scorer) will review the challenge and pronounce their findings to the challenger. If the challenge is upheld, the \$1 will be returned to the athlete. If the challenge is rejected, the fee will be deposited in the Tennessee 4-H Shooting Sports funds. No fee is required to point out mathematical errors.
- 23 **Protests** - Competitors only (no adults), may protest; a) an injustice they feel has been done them individually; b) the conditions under which another competitor was permitted to fire; or c) the equipment another competitor was permitted to use. **How to protest** – Official protests may be filed in the following order to seek redress of alleged wrongs.
- a. **Range Scorer** – The protest is made orally to the range scorer. If not satisfied with that immediate decision;

- b. **Range Jury** – The protest may be stated orally to the jury of 2 or more officials present at the match (excluding team affiliations, parents, coaches, agents, etc.), indicating the decision of the range scorer. The jury should include a member of the Competition Management as well as the range scorer. If not satisfied with this decision;
- c. **Discipline Superintendent/Jury** – The protest must be submitted in writing to the Discipline Superintendent, accompanied by a \$25 cash protest fee, within 30 minutes of the conclusion of the occurrence. The match jury will consider the statement, may ask questions of the athlete and range officials and will render a decision in an expeditious manner. Coaches, parents, and other parties may not participate in the process. The decision rendered by the jury is final and no further appeal is possible. If the protest is ruled valid, the fee will be returned.

- 24 **No Golf Carts, ATV's, Club Cars or similar will be permitted (exceptions apply for shotgun fields transportation, must be legal age to operate).**
- 25 **Violation of Rules** - Match and/or range officials may dismiss or disqualify a participant if he/she believes a participant or coach violates any of the general or discipline specific rules.

Revised 12/15/25

\$4.00



4-H Archery Member Manual

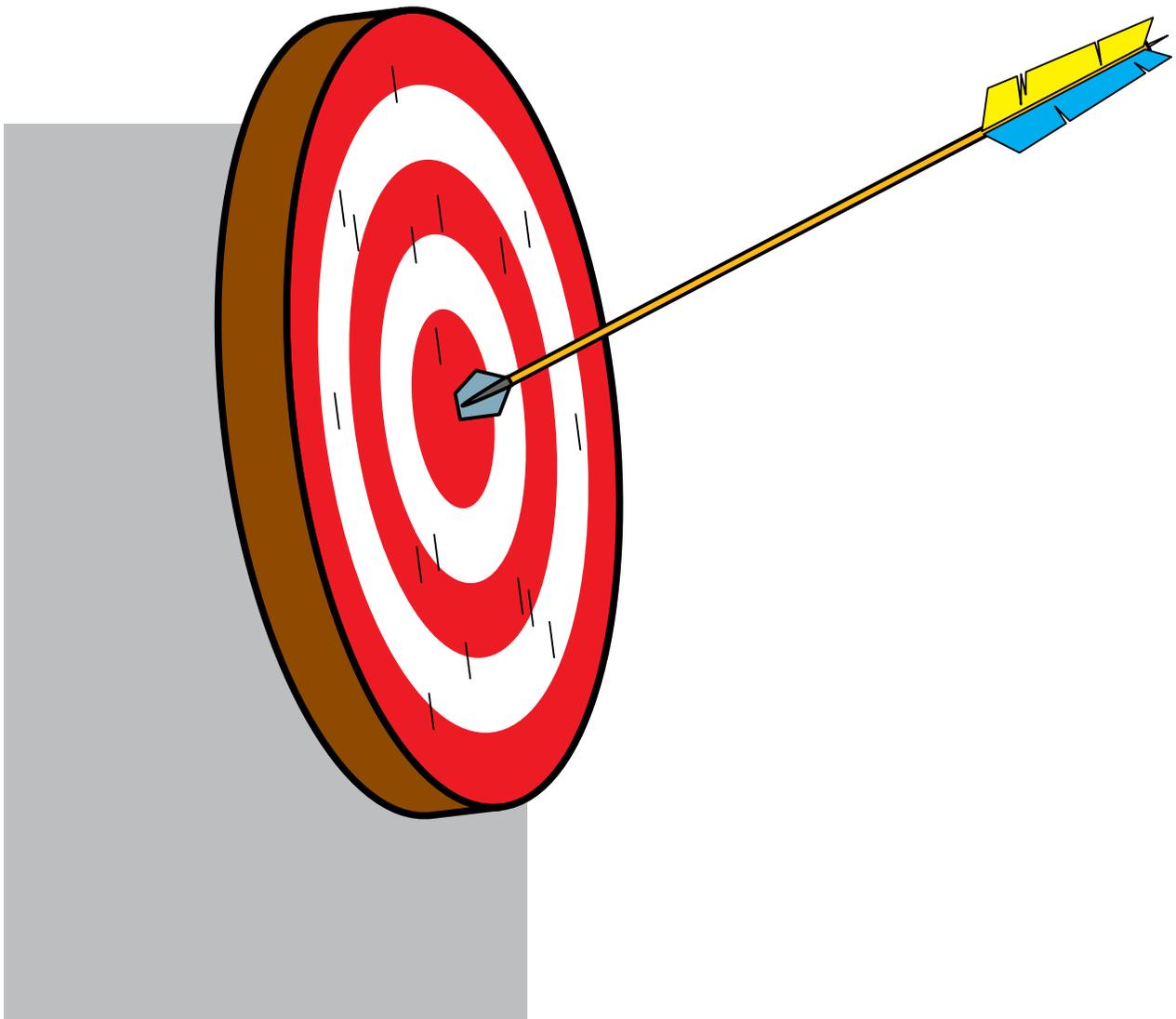


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Serial archery drawings courtesy of Ohio State University Extension.

Revised by Debera L. Tracy Schreiber, 4-H youth development faculty, Wallowa County, Oregon State University.



Chapter 1

How It All Began

Introduction

Welcome to the great sport of archery! As you begin this project, you join the millions of people that have been using bows and arrows from necessity, for sport, and for fun!

The tradition of archery goes back at least 50,000 years. It was created by kings, queens, soldiers, and adventurers. The invention of the bow and arrow was one of the first attempts at harnessing energy. According to the *Encyclopedia Britannica*, the invention of the bow was one of the three most important cultural advances in history, equaled in importance only by the discovery of fire and the development of speech.

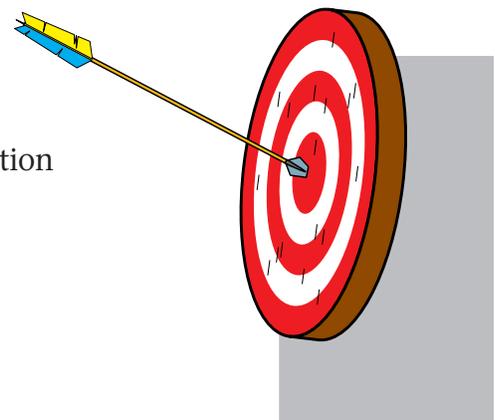
About 200 years ago, Native Americans living in Oregon began to use the bow and arrow. The two most commonly found types of arrow points from this period are called the Rosegate and the Desert Side-notched point. These points typically were made from a variety of cherts, jaspers, and obsidian. If you find these arrow points when exploring the outdoors, leave them where they are. Report your find to the public land manager, an archaeologist, or the local university.

This project is intended to give the beginning archer some basic skills. The more advanced archer can work through the project book to enhance skills.

Archery is fun, but it can be dangerous. Since people do hunt with bows and arrows, we know they can kill; so you must be careful! Treat the bow and arrow as a loaded firearm!

Things you can do

1. Read archery books and magazines to learn about the sport and its history. List the books and articles you read and discuss them with your leader.
2. Begin a scrapbook for your archery project. Include pictures of yourself learning to shoot. Also, include information about your equipment.



The Ten Commandments of Archery Safety

1. I will always treat my bow and arrows as a firearm and not point them at anything that I do not intend to kill.
2. I will not nock an arrow or draw a bow when a person is in front of me.
3. I will never release an arrow where I cannot see the entire flight of the arrow.
4. I will not shoot an arrow straight up.
5. I will not release a drawn bow without an arrow (dry fire).
6. I will not shoot an arrow that is too short for my draw or one that is damaged or too weak for my bow.
7. I will not shoot toward houses, highways, livestock, or where there are people.
8. I will not go forward to retrieve my arrows until all are through shooting.
9. When looking for an arrow beyond the target, I will set an arrow in the top of the target, or set my bow in front of the target to warn others that I am behind the target.
10. I will always be courteous to others, conserve wildlife, and preserve the natural beauty of my country.

Chapter 2

The Bow and Arrow

There are three types of bows:
 (1) recurve, (2) longbow, and (3) compound.

Recurve bow

Recurve bows commonly are made of fiberglass or laminated fiberglass and wood. Some have risers made of metal or limbs made from a synthetic material such as graphite. Because of their curved limbs, recurve bows shoot arrows faster than longbows. They often are used in hunting and target shooting. Archers who compete in Olympic events have to use recurve bows.

Longbow

A longbow is a straight piece of wood or fiberglass shaped to form limbs, string notches, and a grip. Fiberglass longbows typically are inexpensive; handcrafted wooden longbows, used by archers who prefer traditional hunting equipment, typically are expensive. Many modern longbows are made of laminated wood and fiberglass.

Compound bow

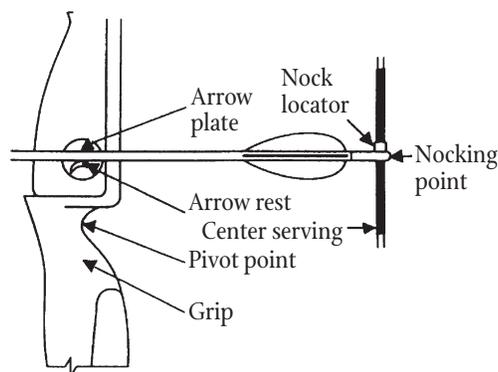
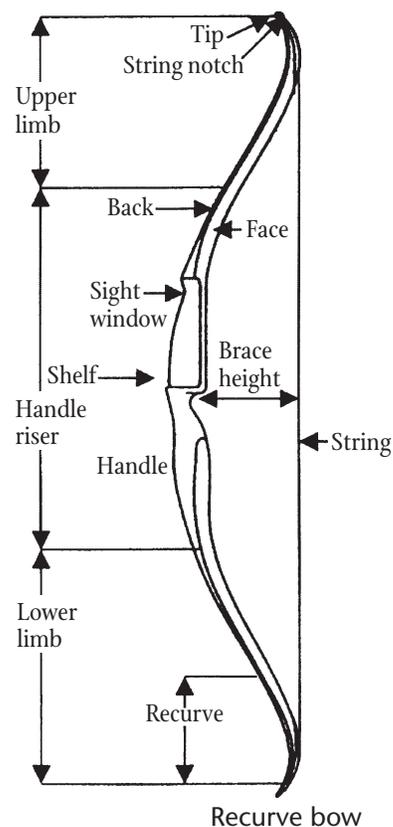
Compound bows use cables and pulleys to store and release energy. The cable and pulley system creates a “let-off” or bump about halfway back during the draw. This let-off is where the maximum force of the draw is felt. Once past the let-off, it becomes much easier to draw and hold back the string. This feature makes compounds popular with bowhunters, who often have to wait at full draw while their quarry comes into range or clears an obstacle.

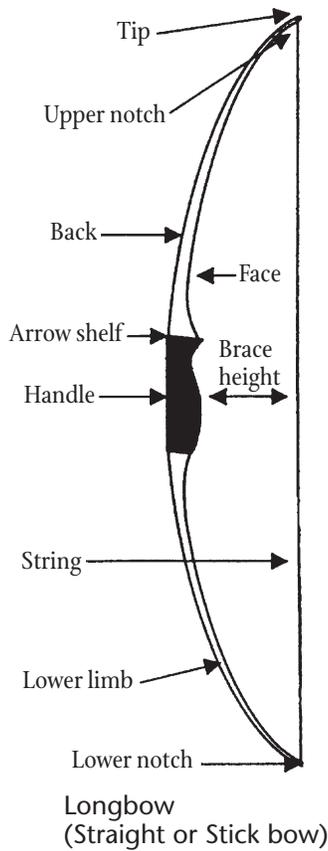
This type of a bow is **not** recommended for a beginning archer in this program.

Selecting a bow

If you select the right equipment, your experience will be more successful and more enjoyable. The first piece of equipment you will select is a bow.

The first thing you want to determine is whether you need a left-hand or a right-hand bow. There is more involved in this decision





than whether you are left or right handed. Just as most of us favor one hand over the other, we also favor one eye over the other. But, there is no correlation between our preferred hand and our preferred eye. Do the eye dominance test below to help you determine which eye you favor.

Bows are designed to be drawn a standard distance, called a **draw length**. With longbows and recurves, the farther back you pull the string, the greater force you exert. The amount of force (measured in pounds) it takes to draw a bowstring on a recurve or a longbow is called the **draw weight**. As a beginner, the most important consideration is the draw weight of the bow.

It is very important that you be able to draw the bow fully and hold it for several seconds without undue strain. An archer should be able to hold a full draw for a 7- to 10-second aiming period. Another way to test the draw weight is to pull the bowstring back several times. An archer should be able to pull the bow to full draw 10 or 12 times without noticing muscle fatigue.

A bow that is too heavy will prevent you from developing good shooting form. Start with one that is easy to draw and hold.

Bows are made from wood, fiberglass, and metal.

Weight

Guidelines:

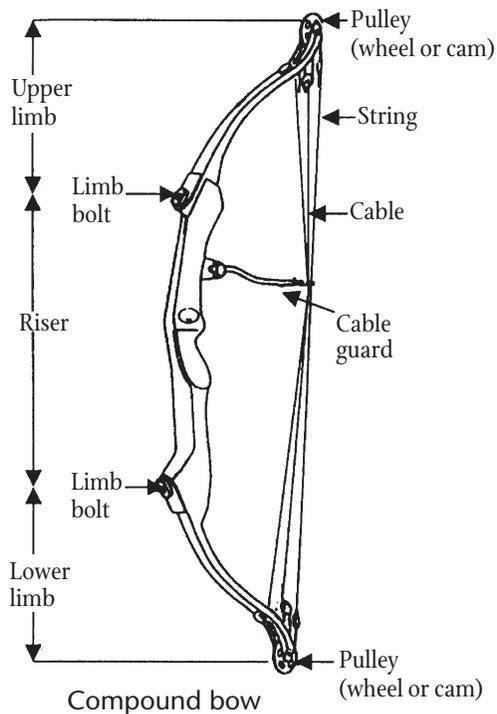
4th to 6th grades, recommended weight is 15 to 22 pounds

7th to 9th grades, recommended weight is 25 to 30 pounds

10th to 12th grades, recommended weight is 35 to 40 pounds

Eye dominance test

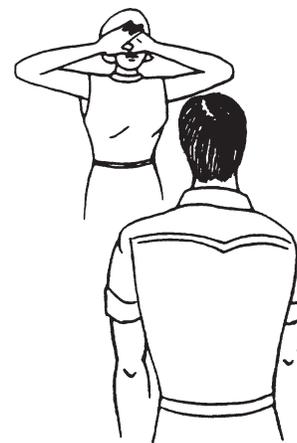
1. Recruit a partner to help you with this test (parent, friend, brother, or sister). Have your partner face you about 10 feet away, standing up.
2. Extend your arms straight out in front of you, with your hands flat and your palms facing down.
3. Place one thumb on top of the other.
4. Bend your wrists so that the backs of your hands are facing you.
5. Tilt your hands together until the fingers overlap, creating a small triangular opening.



6. Keeping both eyes open, center your partner's nose in the triangular opening.
7. Slowly bring your hands back to your face, keeping your partner's nose centered in the opening. Your hands will come back to your dominant eye.

If your dominant eye is on the same side of your body as your dominant hand (right eye/right hand or left eye/left hand), you will find it natural to use your dominant eye. If you are cross-dominant (right eye/left hand or left eye/right hand), you have a greater challenge. Be assured, you eventually will achieve greater success by using your dominant eye and training your nondominant hand to manipulate the arrow and string.

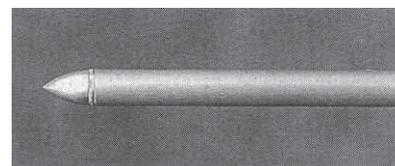
If you are right eye dominant, you will shoot right handed with the bow in the left hand and the string in the right hand. This will be the opposite for left handed archers. Just remember, the arrow is drawn to the dominant eye.



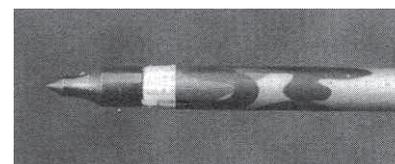
Arrows

Arrows are made from wood, fiberglass, aluminum, or carbon fibers. The stiffness of the arrow is called the "spine." Always use arrows with the proper spine and length for the bow.

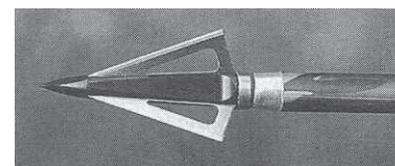
Arrows come with many different kinds of points, each designed for a different use. **Target points** usually are conical or bullet shaped, and are designed to cause minimal damage to foam or grass target mats. **Field points** may be bullet shaped or shaped somewhat like the point of a pencil. They often are used for target practice. **Broadheads** have two or more cutting edges. Bowhunters use other points such as **judo heads** and **blunts** in certain situations.



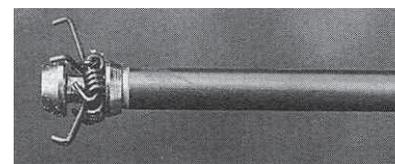
Target point



Field point



Broad head



Judo head

Selecting arrows

You may select arrows made of wood, fiberglass, or aluminum. Do not buy carbon arrows until you are more skilled as an archer.

Wooden arrows

Most wooden arrows are inexpensive. However, with the recent popularity of traditional archery, there are better quality, more expensive arrows available.

Wooden arrows may be less durable than arrows made from other materials. They may warp, splinter, and break with heavy use.



Fiberglass arrows

Fiberglass arrows are mainly for bow fishing. They are not recommended for hunting or target shooting because they are too heavy.

Aluminum arrows

Aluminum arrows are available in a range of sizes, prices, and durability. Most are durable with heavy use and can be restraightened. Replacing fletching, points, and nocks on aluminum arrows is easy.

Carbon arrows

Carbon arrows are for more experienced archers. They are very strong, durable, and lightweight. However, they are expensive.

Many compound bow hunters use carbon arrows. They also are becoming popular with dedicated target shooters who use traditional bows.

Arrow length

Once you have decided which material you want for your arrows, you must choose the right length. Arrows that are too long do not fly well, and arrows that are too short are dangerous. Arrows need to be an inch longer than the full draw of the archer. Archery shops often have a special bow for measuring accurately your proper arrow length.

It is extremely important to have a matched set of arrows. Do not mix and match.

Fletching

The guidance system for arrows is the **fletching**. Fletching is made of either feathers or plastic vanes. It is available in different sizes and colors.

Beginning archers often prefer feathers to vanes because feathers are more forgiving. They can fold or flatten as they pass the bow and arrow rest.

You might prefer plastic vanes if you will be shooting in wet weather or using more durable arrows. However, vanes cannot be shot off the shelf. They require an arrow rest that folds out of the way or does not touch the vanes as they pass.

Things to do

1. Visit an archery shop to see the different types of bows and arrows available.
2. Give a presentation on different types of arrows and their uses.
3. Complete the eye dominance test to determine your dominant eye.

Chapter 3

Accessories and Safety Equipment

Armguard, finger tab, and quiver

The beginning archer needs some accessories to have a successful and positive experience. The most important accessories include an **armguard**, a **finger tab** or glove, and a **quiver**.

Always wear an **armguard** and finger protection when shooting your bow, to protect yourself from injury. Wear the armguard inside your bow arm (the arm with which you hold your bow) between your wrist and your elbow. This keeps clothing out of the path of the string and reduces the chance of injury should the string hit your arm.

Beginning archers should wear a **finger tab** on their string hand (the hand that draws the string). The tab protects the middle three fingers, which hook onto the string as you pull it back. More experienced archers may switch to a **shooting glove** or a **mechanical release**.

The **quiver** holds the arrows. It is a helpful piece of equipment for any archer. Different styles of quivers complement different styles of shooting. **Belt quivers** attach to your belt on the string side of your body and are popular with target archers. **Ground quivers** stick into the ground and often feature a rack to hold your bow when you are not shooting. Bowhunters often use a quiver that mounts directly to their bow.

Other accessories

As you gain skill, you might want to try some other accessories.

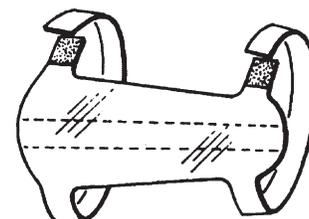
A **sling** worn on the wrist or fingers helps you keep a light grip on the bow.

A **clothing shield** is worn on your chest. It helps keep your shirt or jacket away from a fully drawn string.

A **kisser button** attaches to the string at the point where it touches your lips when you are at full draw. This helps you draw the string to the same point for each shot.

Stabilizers reduce bow torque.

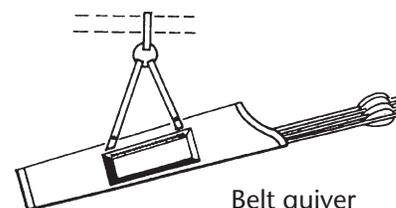
Advanced shooters may install a **clicker** inside the sight window to signal when they have reached full draw.



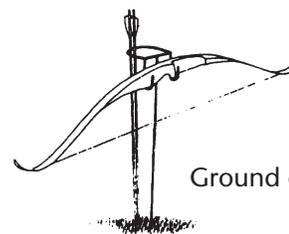
Armguard



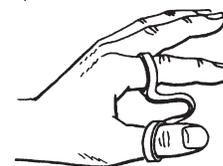
Finger tab



Belt quiver



Ground quiver



Finger sling



Clothing shield



Things to do

1. Prepare a presentation to give at a club meeting or fair.
2. Attend an archery tournament.
3. Make a list of archery equipment you are using for this project.
4. Mount examples of smaller archery accessories (such as arrow points and finger tabs). Label each item and exhibit this at the fair.

Chapter 4

On the Range

Safety first

The place that you will shoot your bow and arrow is called a **range**. The most important aspect of an archery range is safety. Do not set up targets in front of buildings, sidewalks, or other areas where people might pass. A hillside bank is ideal, but not necessary.

Remove brush and obstacles from behind targets as much as possible. This helps avoid lost and broken arrows. It also prevents arrows from deflecting, so you can find them more easily.

You might need to find out if your city has an ordinance about shooting within the city limits.

The shooting range should be defined by clear perimeter lines. These lines can be made of tape, lime, or rope. If you are shooting indoors, make sure that there are no doors that could allow people to walk into your range. Post warning signs around the perimeter of the range to help ensure that spectators and nonparticipants stay out of the area.

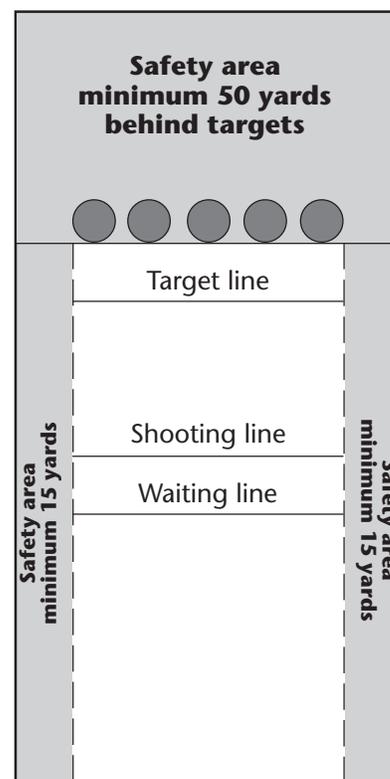
Parts of a range

A range should have a shooting line, a waiting line, and a target line. These can be made with tape or lime.

The **shooting line** is the line that the shooter straddles to fire his or her arrows. With beginning archers, this line needs to be close enough to the target so that the archer will be successful and hit the target every time.

The **waiting line** should be 3 yards behind the shooting line. Shooters are required to stand behind the waiting line until it is safe to retrieve their arrows, and until the range commander allows them to advance to the target line. Waiting behind the waiting line gives all other shooters an opportunity to concentrate fully on each shot.

When it is time to retrieve arrows, and the range commander has given the signal, you may approach the **target line**. The target line should be 3 yards in front of the target. This line acts as a “speed bump” and slows the people walking forward to pull their arrows so they won’t run into the arrows sticking out of the targets. It also keeps the people that are waiting to pull their arrows a safe distance from the targets.



Controlled access/spectator area



As you begin to shoot, you will want to practice shooting into **target butts** with target faces attached. Make sure your target is attached securely to the butt. Target butts need to be approximately 4 feet square. This size allows more arrows to hit the targets. Targets are made of foam or natural materials such as straw bales, tightly wound grass, or excelsior bales.

Begin shooting from a distance of approximately 10 yards. As your skills improve, increase this distance in 5-yard increments.

You will shoot with your club at a range, but you may want to set up a target at home to practice. If you are going to do this, make sure that you have plenty of room.

Things to do

1. Visit an archery range or pro shop. Notice what the archery butts are made of, and at what distances their shooting lines are set up.
2. Draw a diagram of your home archery range.



Chapter 5

Let's Shoot!

Nine steps of shooting

Shooting can be divided into nine steps. The key to becoming an accurate archer is being consistent every time you shoot. Practice these nine steps until you have mastered your shooting skills.

1. Stance
2. Nock
3. Set
4. Pre-draw
5. Draw
6. Anchor
7. Aim
8. Release
9. Follow through

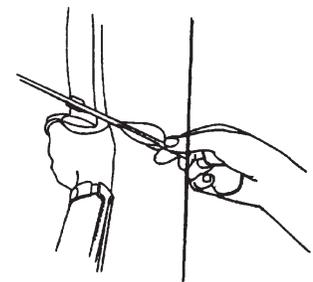
1. Stance

Place one foot on each side of the shooting line. Find a comfortable, balanced stance with your feet shoulder width apart. Stand straight and tall, with your head up and your shoulders relaxed. Archers shooting from a wheelchair should put one pair of wheels on each side of the shooting line.



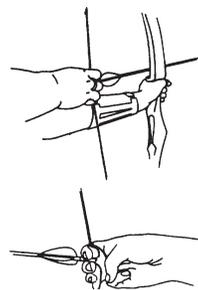
2. Nock

Place the arrow on the arrow rest, holding the arrow close to the nock. Keep the index fletching (the different colored feather or vane) away from the bow. Snap the nock onto the bowstring under the nock locator.



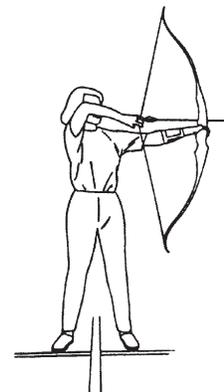
3. Set

Set your bow hand on the grip using only the web and the meaty part of your thumb. Your bow hand should stay relaxed through the whole shot. Set the first groove of your first three fingers around the bowstring, creating a **hook**. Keep the back of the string hand relaxed.



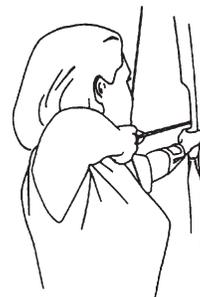
4. Pre-draw

Raise your bow arm towards the target, without raising your shoulder. Look at the target and line up the bowstring with the center of the bow. Make sure the elbow on your bow arm is out of the way. The elbow of your drawing arm should be near the level of your nose.



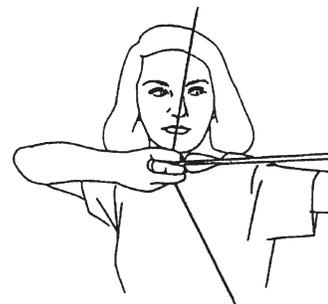
5. Draw

Draw the bow back to full draw. Your elbow should be directly behind the arrow. Continue looking at the target, and keep the string lined up with the center of the bow as you draw.



6. Anchor

Draw the string to the front of your chin, placing the knuckle of your index finger directly under the side of your jaw. Make sure that the string is lined up with the center of your nose.



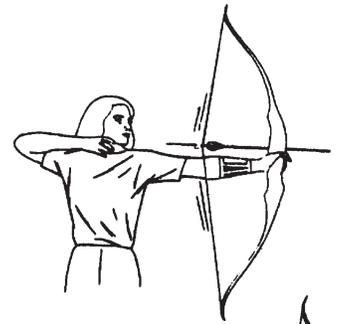
7. Aim

Focus your eyes on the center of the target. Keep the string lined up with the center of the bow. Continue the gradual draw.



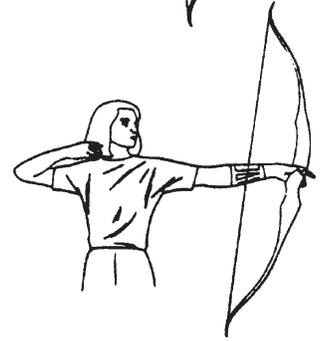
8. Release

Simply release all the tension in your fingers and drawing hand all at once. Continue extending the bow arm toward the target as you release. Continue focusing on the target.



9. Follow through

The drawing hand continues back beside the neck with fingers relaxed, ending up near the shoulder. The bow arm continues extension toward the target. Continue focusing on the target. Maintain your follow through until the arrow has hit the target.

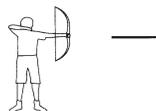


Retrieving arrows

When the range commander signals, archers may approach the target line. One archer per target may go forward to retrieve her or his arrows.

Walk forward slowly, watching for arrows that fell short or bounced out of the target. Retrieve these arrows as you come to them.

Be very careful when pulling the arrows. Be sure no one is standing behind you. Stand to the side of the target, and place one hand on the target face next to the arrow. Press the target against the butt and grab the arrow as close to the target as possible (touching the hand on the target face). Pull the arrow straight out. Place this arrow in the quiver before you pull out the next.



Chapter 6

Common Faults and How to Fix Them

It can be difficult to determine why arrows are landing where they are. Watching where arrows land on the target face can help you identify shooting form errors. Archers with good and consistent shooting form should shoot their arrows in a **group**. A group is when the arrows are all close together, even if the group is not in the center.

Here are some arrow patterns and common errors that cause the patterns.

Pattern	Possible reasons	How to correct
High arrows	Arrow nocked low.	<ul style="list-style-type: none"> • Check the nocking point frequently. • Be sure the nocking point is perpendicular to the arrow shelf so that the arrow, when nocked, is perpendicular to the string.
	Pulling drawstring back too far.	<ul style="list-style-type: none"> • Maintain a consistent anchor point.
	Raising the bow arm during the release.	<ul style="list-style-type: none"> • Concentrate on form. • Look right down the arrow at the target.
	Pulling the hand down during release.	<ul style="list-style-type: none"> • Maintain follow through until the arrow hits the target. • Lightly grip the bow, allowing it to rock forward naturally when you release it.
Low arrows	Dropping the bow arm during release.	<ul style="list-style-type: none"> • Maintain follow through until the arrow hits the target. • Lightly grip the bow, allowing it to rock forward naturally when you release it. • Keep the bow arm at the same height as at full draw.
	Collapsing. (Bow arm moves to the right, string hand moves out or forward.)	<ul style="list-style-type: none"> • Continue pulling. • Maintain a consistent anchor point.
	Creeping. (Reversing the drawing motion, or allowing the arrow to move forward before release.)	<ul style="list-style-type: none"> • Continue pulling through with one motion all the way through the release.
	Leaning towards the target.	<ul style="list-style-type: none"> • Stand up straight.
	Arrow placed on shelf instead of rest.	<ul style="list-style-type: none"> • Place arrow on the rest.

Pattern	Possible reasons	How to correct
Left and right arrow patterns	<p>Canting the bow. (Tilting the bow to the right or to the left.)</p> <p>Peeking. (Pulling your face around the bow to get a better look at the target when shooting.)</p> <p>Gripping the bow too tightly.</p>	<ul style="list-style-type: none"> • Keep the bow straight up and down. • Focus on the target. • Maintain your follow through until the arrow hits the target. • Keep your bow hand relaxed throughout the shot. • Place only your thumb and forefinger around the bow.
Left arrows (Right for left-handed shooters)	<p>Plucking. (Pulling the release hand away from the face during release.)</p> <p>Flinching with the left arm.</p>	<ul style="list-style-type: none"> • Continue to draw the bowstring as you relax your fingers. • Keep your hand close to your face. • Wear an armguard to remove the fear of string slap.
Extremely left arrows (Right for left-handed shooters)	Aiming with the left eye for a right eye shooter or vice-versa.	<ul style="list-style-type: none"> • Perform the eye dominance test and trust it. • Put a piece of scotch tape over one lens of a pair of shooting glasses to make you use your dominant eye.
Low left arrows (Low right for left-handed shooters)	String hitting the chest or bow arm, or being caught by loose clothing.	<ul style="list-style-type: none"> • Open your stance slightly. • Wear an armguard. • Dress appropriately, with no loose clothing.

These faults are common and may be corrected easily. Remember that the most important factor in successful shooting is good, consistent form. Practice your form and follow through, and you will have won more than half of the battle.



Glossary of Archery Terms

aim: Any method used to point the arrow in the direction you want it to go. When using sights, to superimpose the sighting device over the spot you wish to hit with your arrow.

anchor: Consistent placement of the drawing hand to a position on the face, mouth, or jaw when the bow is drawn fully.

anchor point: The specific point that your drawing hand touches when the bow is drawn fully.

archer: One who shoots a bow.

armguard: A piece of stiff material, usually leather, used to protect the bow arm from the slap of the bowstring or broken arrow upon release. It is worn on the inside of the forearm of the bow arm.

arrow: A projectile shot from a bow.

arrowhead: The tip of an arrow.

arrow plate: The portion of the sight window that touches the arrow shaft when the arrow is resting on the bow.

arrow rest: The horizontal projection on the bow that supports the arrow.

back: The side of the bow away from the bowstring.

barbed arrow: An arrow designed for fishing, having barbs so it will not come out.

barebow: A style of shooting without a bow sight.

belly or face: The surface of the bow facing the string and toward the archer when shooting.

belt quiver: An arrow container that is worn on the archer's belt.

blunt tip: An arrow point usually made of rubber and used in some archery activities.

bow: A device made of a piece of flexible material with a string connecting the two ends, used to propel an arrow.

bow arm or bow hand: The hand and arm that holds the bow.

bow sight: A device placed on the bow to aid the archer in aiming.

bow square: A T-shaped device used to measure brace height and for placing nock locators.

bowstring: The string that connects the two ends of the bow and propels the arrow.

bow stringer: A device used to string a bow.

boyer: A person that makes bows.

brace height: The distance from the pivot point to the string when a bow is strung. (Also called string height; once called the fistmele.)

broadhead: A very sharp arrow point, usually with two or more cutting edges, used for hunting.

bull's eye: The center of the target.

butt: Any backstop to which a target face is attached.

cant: To tilt the bow left or right while at full draw.

cast: The ability of a bow to propel an arrow a given distance.

center serving: The material in the center of the bowstring where the arrow is nocked. Protects the string from wear.

clicker: A small strip of metal, mounted on the sight window in front of the arrow rest, that gives a precise indication of when full draw is attained by snapping off the point of the arrow with an audible click.

cock feather: The feather that is at right angles to the bow during the draw; usually the odd-colored feather (also called "index feather.")

composite bow: A bow made of more than one material.

compound bow: A hand-held, hand-drawn bow that uses a pair of cables and wheels to store more energy.

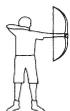
creep: To allow the arrow to move slowly forward before release.

crest: The colored bands around the shaft of the arrow which aid in its identification.

dominant eye: The eye with which one naturally aims.

draw: To pull the bowstring back. Also, the distance the bowstring is pulled back.

draw length: At full draw, the distance from the nocking point to the grip is the "true draw length," and the distance from the nocking point to the side of the bow farthest from the archer is the "traditional draw length."



draw weight: The weight, measured in pounds, used to bring the bow to full draw.

drawing arm or hand: The arm that draws the string.

end: A set number of arrows that are shot before going to the target to score and retrieve them.

face or belly: The side of the bow closest to the bowstring.

finger tab: A flat piece of smooth material which protects the fingers of the drawing hand.

finger sling: A small strap that attaches to the thumb and index finger of the bow hand.

fistmele: The distance between the handle and string when the bow is strung.

fletching, fletch: The feathers, plastic vanes, or other devices attached to the arrow shaft which stabilize the flight of the arrow. Also, to attach these devices to the arrow.

flu-flu: An arrow with large untrimmed feathers which restrict the distance it will travel; used for shooting aerial targets.

follow through: Maintaining the motion of the upper body muscles after releasing the string.

full draw: The position of the archer when the bowstring has been drawn to the anchor point.

grip: The portion of the bow that is held by the bow hand.

ground quiver: A device that is stuck into the ground or sits on the ground to hold arrows and/or a bow.

group: To shoot arrows in a pattern. Or, the pattern of the arrows in the target.

index feather: The feather that is at right angles to the bow during the draw; usually, the odd-colored feather (also called "cock feather.")

judo point: an arrow point with springy wires attached to it to limit the depth the arrow can penetrate the ground or target.

kisser button: An indicator or protrusion placed on the bowstring so it touches the lips while the archer is at full draw. Used as an aid to reinforce the anchor position.

laminated bow: A bow made of several layers of material glued together, usually two layers of fiberglass and a hardwood core.

let down: Returning from full draw to the undrawn position with control and not releasing the string.

let off: When drawing a compound bow, the point just after the maximum draw weight, when a “bump” is felt and the draw weight decreases to a fraction of the maximum.

limb: Upper or lower part of the bow that bends when the string is drawn back; the part of the bow where the energy is stored.

longbow: A style of bow that is straight when unstrung. Also known as a straight or stick bow.

mat (butt): The circular disc of grass or plastic to which the target face is attached.

nock: To place the arrow on the string. Also, the attachment to the rear end of an arrow which is placed on the bowstring and holds the arrow on the string.

nock locator (point): The mark or device that indicates where the arrow is to be placed on the string.

notch: The groove or ridge in the tips of the bow limbs that holds the bowstring when the bow is strung.

pivot point: The point on the face side of the bow handle which is the deepest part of the bow grip, approximately the center of the riser.

quiver: A device used to hold arrows.

range: A place set up for shooting.

recurve bow: A bow with limbs that bend away from the archer when the bow is held in the shooting position.

release: The act of relaxing the fingers that are holding the bowstring at full draw.

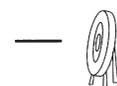
riser: The middle section of the bow that divides the upper and lower limbs.

round: A prescribed number of arrows, ends, and games, shot at prescribed distances.

serving: The wrapping of material around the loops and center of the bowstring to protect it from wear.

shaft: The length of tubing or wood that makes up the body of the arrow.

shelf: The bottom portion of the sight window.



shooting glove: A special three-fingered glove that can be worn to protect the tips of the fingers that draw the bowstring.

shooting line: The common line straddled by all archers when shooting.

sight window: The cut-out section of the bow above the handle that allows a clear view of the vertical movement of the sight.

spine: The stiffness or amount an arrow bends, determined by hanging a 2-pound weight from the center of the arrow and measuring the bend.

stabilizer: A rod attached to the handle riser that absorbs the vibrations of the bow when the string is released. Usually, there is a weight on the end of the rod.

string hand: The hand that draws the bowstring.

tackle: An inclusive term for archery equipment.

take-down bow: A type of bow that can be taken apart for storage or transporting.

target archery: Shooting arrows at fixed distances at targets, usually in open areas on level ground or indoors.

target face: The front cover of a target, painted with regulation rings or designs.

tip: The very ends of the limbs of a bow.

torque: An undesirable twisting of the bow by the bow hand; or, of the string by the string hand.

toxophilite: A lover of the bow; an archer.

trajectory: The path of an arrow in flight.

tune: To adjust the variables in the bow and arrow system to achieve the best arrow flight and arrow groups.

vane: Any fletching made of a material other than feathers, usually plastic.

windage: The left-right adjustment of the bow sight.

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Activity 11

The Importance of Safety

Project Outcomes

- Describe the importance of basic archery safety

Archery continues to be a sport involving hand-eye coordination, consistency, and the need for practice to become proficient. Archery remains a sport with relatively slow projectiles shot over relatively short ranges. Basic knowledge and awareness of common safety considerations are necessary for safe, responsible, and enjoyable use of archery equipment.

Clothing and shooter awareness is a concern. Make sure if you have longer hair, it is pulled back, and any hanging earrings or jewelry like necklaces are tucked away. Hoodie strings and loose clothing will also need to be tucked in.

For equipment, you should never pull back a bow without an arrow to avoid dry firing the bow. Also, take note of the 10 commandments of archery safety below.

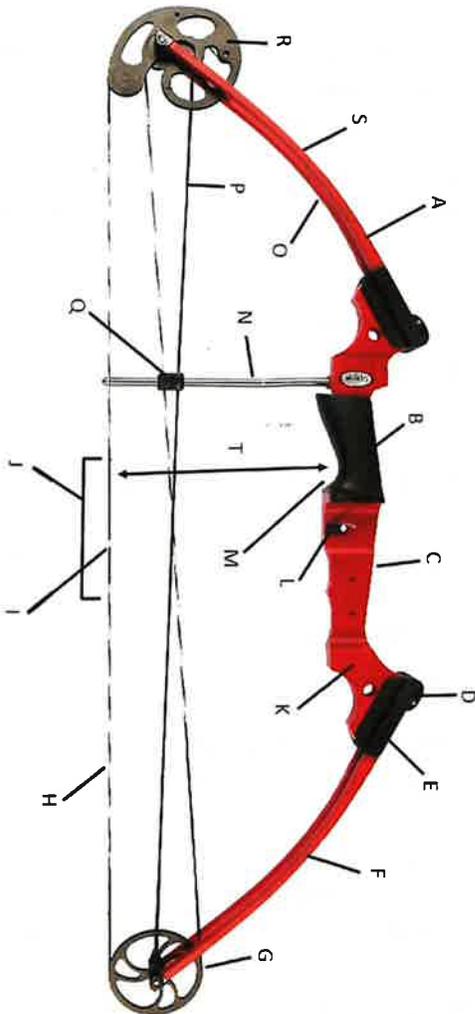
THE TEN COMMANDMENTS OF ARCHERY SAFETY

- 1) I will always treat my bow and arrows as a firearm and not point them at anything that I do not intend to shoot.
- 2) I will not nock my arrow or draw a bow when a person is in front of me, and I will always shoot toward a target.
- 3) I will never "dry" fire a bow without an arrow (pull back on a bow string with no arrow in place).
- 4) I will never shoot an arrow straight up.
- 5) I will never release an arrow where I cannot see the entire flight of the arrow.
- 6) I will never shoot an arrow that is too short for my draw or too weak for my bow.
- 7) I will not shoot at a target that is too thin to stop my arrow.
- 8) I will not shoot toward houses, highways, livestock, or where there are people.
- 9) When shooting with another person, I will not go forward to retrieve my arrows until an "all clear" sign has been given. When looking for arrows beyond the target, I will set an arrow in the top of the target to warn others that I am behind the target.
- 10) I will not use damaged equipment. I will check arrows before shooting, for loose feathers/vanes, points, and nocks, and repair before using. I will check for frayed strings and inspect arrows and bows for cracks and destroy them if damaged in this way.

Activity 12 Archery Equipment

Project Outcomes

- Correctly identify the different types of bows
- Label the parts of all types of bows
- Name and identify the parts of an arrow
- Identify proper protective equipment (shoes, arm guards, release, finger guards)

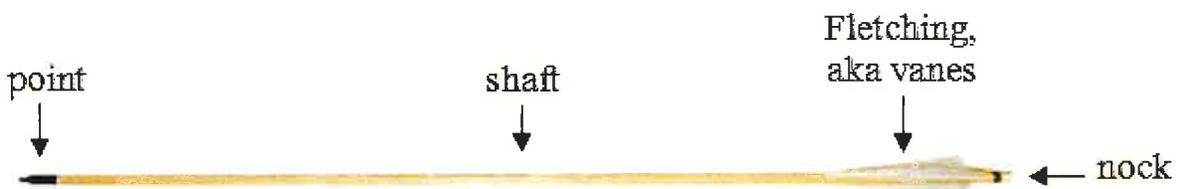
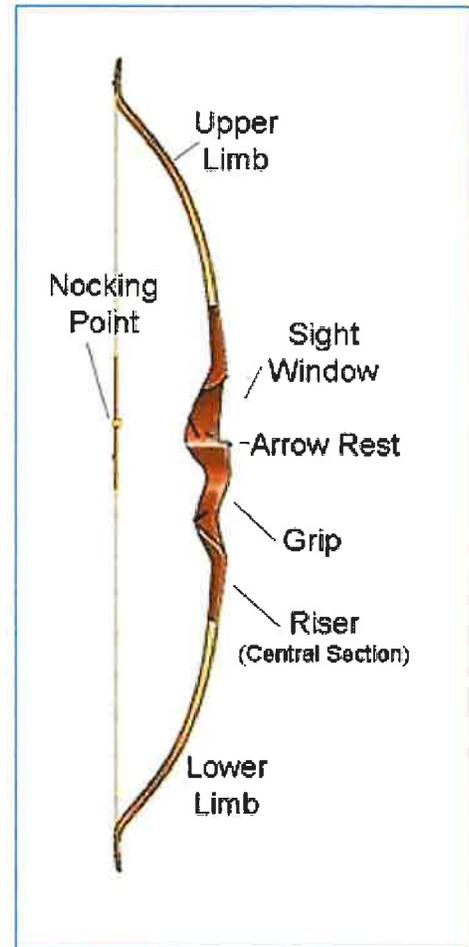
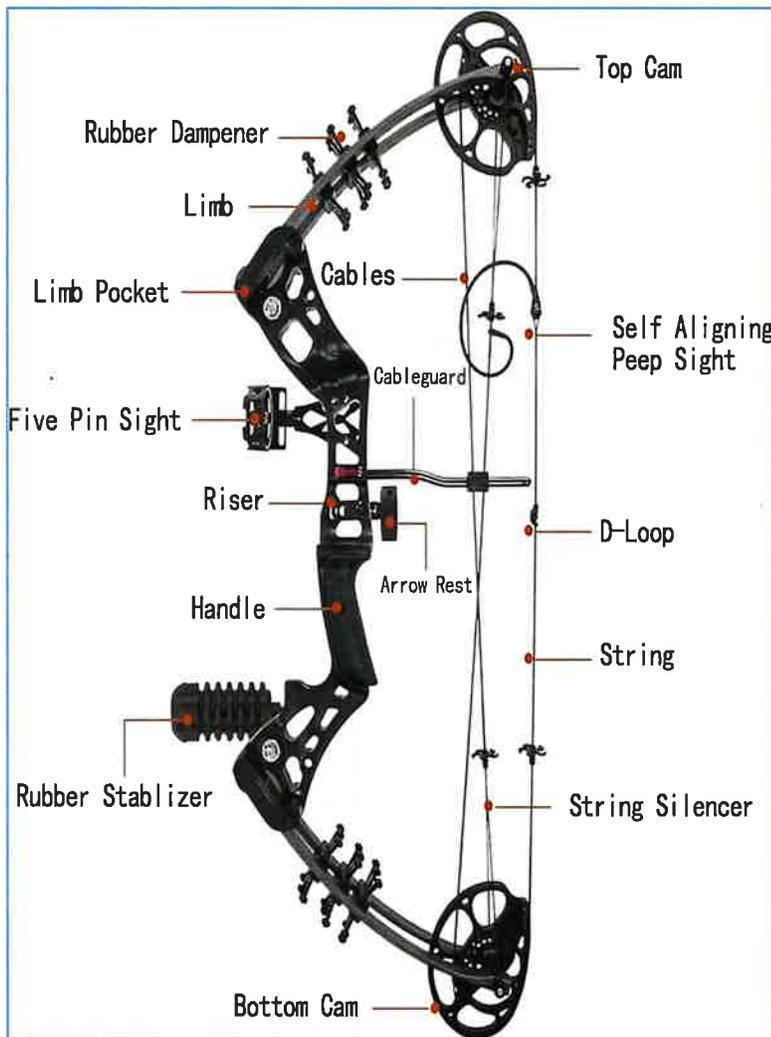


- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____
- H. _____
- I. _____
- J. _____
- K. _____
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- T. _____

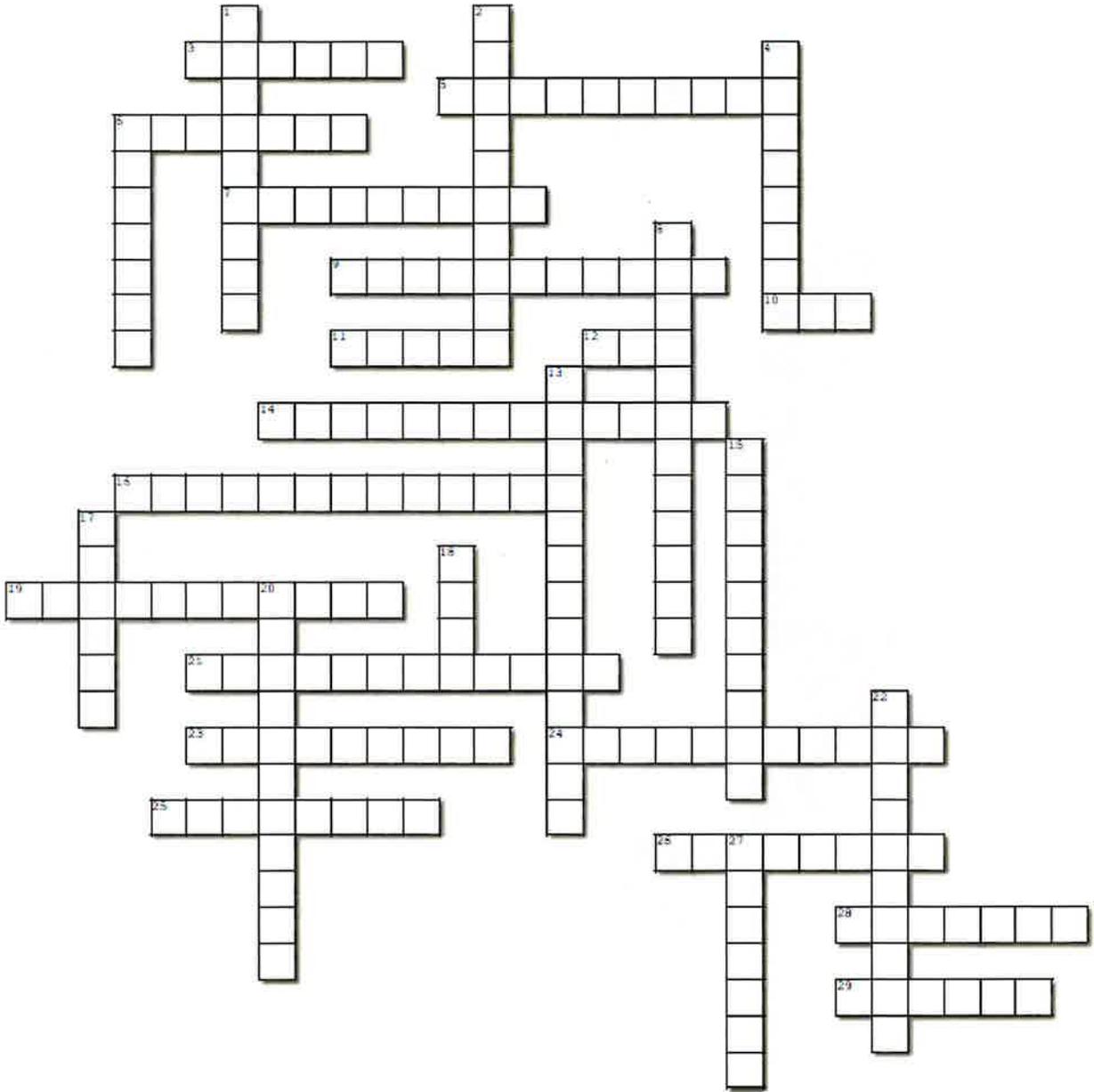
Word Bank

Limb Bolt	Bowstring	Riser	Idle Wheel	Nock Locator	Cable Guard	Cable
Brace Height	Grip	Cam	Lower Limb	Upper Limb	Cable Slide	Arrow Rest
Bow Face	Bow Back	Serving	Pivot Point	Limb Pocket	Sight Window	

1-2 YEARS IN PROJECT



Use the hints on the next page to find the answers for the crossword puzzle.



Across

3	A "bad" form habit developed from anticipating the release of the arrow. The result is a poor release, possibly in the jerking of the bow arm, or of the release.
5	Originally made of slate, these callers can also be made from glass, aluminum, titanium and other materials. Dragging a wooden, graphite, composite or metal striker across the surface produces turkey sounds.
6	Frightening a flock of turkeys in all directions in order to call them back into gun range during a fall hunt.
7	A gobbler that is spending most of the day with his harem of hens. Such gobblers are very difficult to call.
9	A small, two-piece box call.
10	The breeding season for cervids, which is in the autumn.
11	A means of judging a trophy by compiling a set of measurements of an animal's antlers, skull, or horns.
12	Where a deer or elk has staked out his territory by scraping away the bark of a small tree, leaving his individual scent behind.
14	A device for visually inspection of an arrow's "trueness" (shaft straightness, point or broadhead, or nock alignment), used by placing an arrow supported on each end, between two free running rollers.
16	An anchor locating device that is attached to the string, usually a small rubber or plastic disc that you fit in corner of your mouth on full draw and anchor. It helps keep a consistent anchor point, which is very important for consistent form and accuracy.
19	An electronic meter used to measure an arrow's speed coming out of the bow. The arrow is shot through a "window" in the device and gives out readings in fps (feet per second).
21	A consistently repeatable indexing point somewhere near your ear, cheek, behind your ear (if you're a release shooter), or possibly your lip or cheek, if you are a "fingers" shooter.
23	Scent carried by the wind.
24	Is the measurement of the length of the nock end of the arrow to the bows grip pivot point for an individual archer. This changes to fit the individual's particular size. (Arm length, anchor point, etc.)
25	Term used to describe a rabbit or squirrel that has eluded the dogs and/or the hunter by entering a tree cavity, hole in the ground or other such refuge.
26	The act of searching terrain for game by observing through binoculars or other magnified optics.
28	A device that serves the same function as a "draw stop" (for bows unequipped with draw stops) usually found on Olympic or FITA style recurves.
29	The dreaded "enemy" of good consistent accuracy. It is a "form" problem. Basically, it is holding, gripping, or releasing the bow in such a manner that the bow "twists", and your shot ends up being poor.

Down

1	The feathers or vanes on an arrow. Originally made of split turkey feathers, most vanes are now plastic.
2	A two-dimensional decoy.
4	Tool used to precisely align feathers or vanes that are being glued to an arrow during manufacturing.
6	A thinner more abrasive resistant string material that is "wrapped" around the string bundle to prevent wear and damage to bow strings at critical points.
8	The tom's yelp, slower and lower pitched than hen yelps.
13	The largest race of Canada geese, weighing 14 pounds or more. Many are non-migratory.
15	Setting up in area turkeys frequent and calling occasionally, hoping a bird will come within earshot.
17	A member of the deer family, such as mule deer, elk, moose, and caribou.
18	Area of the bow riser that is held when the bow is shot. Usually made of wood plastic, or rubber, and in one piece, or two side plates. Locates the bow precisely in the hand.
20	A bow designed so that, when strung, the bow curves back against its natural bend, giving it great power when an arrow is released.
22	A short loop of string added to the bowstring and used by release shooters. The arrow is nocked inside of the string loop, and the release clamps onto the loop, causing the pull to be straight back of the arrows center (instead of under), and also helpful in aiding to reduce "torque" induced by twisting of the release.
27	The growths of bone-like material protruding from the skull of a male member of the deer family.

ANSWER KEY

Across

3. finch
5. slate call
6. scatter
7. henned up
9. scratch box
10. rut
11. score
12. rub
14. arrow spinner
16. kisser button
19. chronograph
21. anchor point
23. air scent
24. draw length
25. holed up
26. glassing
28. clicker
29. torque

Down

1. fletching
2. silhouette
4. fletcher
6. serving
8. gobblers yelp
13. giant Canadas
15. blind call
17. cervid
18. grip
20. recurve bow
22. string loop
27. antlers

Experience

Have a supervising adult hold a bow and identify all the parts you can remember. Then wax the string and safely store the bow. You could video this experience and upload the video for your 4-H portfolio.

Contact your local 4-H office for more information on shooting sports programs in your county.

