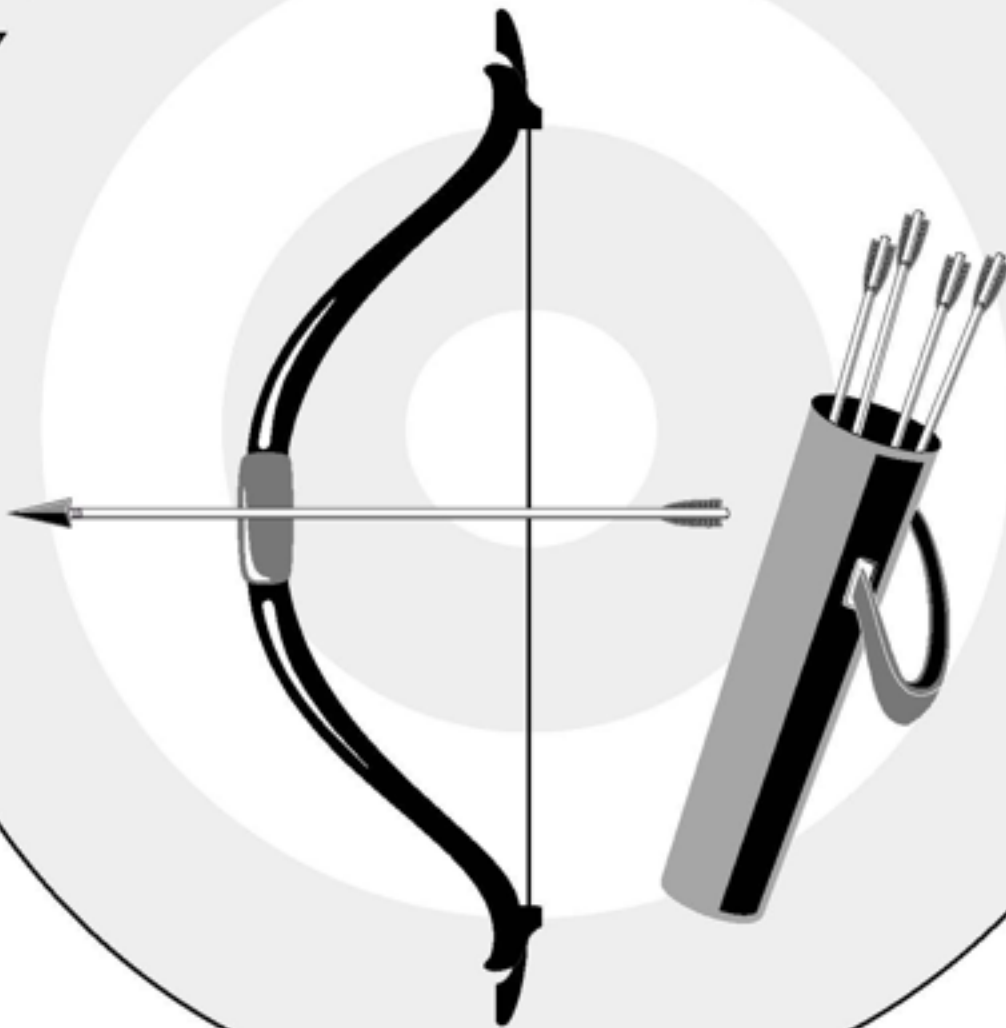


 EM4426

WASHINGTON 4-H ARCHERY PROJECT





WASHINGTON 4-H ARCHERY

HISTORY OF ARCHERY

The bow and arrow have been used as a tool for hunting for at least 50,000 years. Flint arrowheads used years ago can still be found in some parts of Washington. The bow also protected persons from their enemies, as well as secured their food. Expert archers won early military wars. Thus, archery became a symbol of power and was included in the seal of the United States. It also became a symbol of romance through tales of Robin Hood and Cupid.

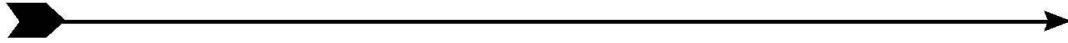
Since the National Archery Association began in 1879, archery has become a popular sport. Millions of people now enjoy archery as a sport. We hope you will, too.

What Can You Learn through this Project?

1. To select and care for a suitable bow and arrows.
2. To shoot a bow and arrow accurately and safely.
3. About birds and animals and wildlife conservation.
4. About shooting regulations.
5. To enjoy archery as a sport.

What Is Expected of 4-H Members in this Project?

1. Be a member of a club; archery should not be taken as an individual project.
2. Help plan a yearly club program, which includes individual goals for each member.
3. Attend club meetings regularly.
4. Learn and practice archery safety.
5. Participate in some field trips and/or archery matches.
6. Give a presentation on some phase of archery.
7. Complete a yearly Record Book and keep a Permanent Record up to date.
8. Participate in the Archery Advancement Program.
9. Be an active, cooperative member.



GENERAL ARCHERY SAFETY RULES

1. Always remember that my bow is a deadly tool and will do nothing that might endanger others.
2. Know and obey the range rules.
3. Keep all arrows in their quiver until ready to shoot.
4. To carry arrows in your hands, carry them securely with both hands around all of the arrows, and with your palms facing down. However, the best way to transport an arrow is safely in its quiver.
5. Be sure the area around and beyond your target is clear before you shoot. Never draw a bow if anyone is in front of the shooting line.
6. Always aim and shoot at a definite target; never shoot just for the sake of shooting. Be sure of your target and that it is safe to shoot at it. If you are not sure, take a closer look. If, after a closer look, you are still not sure, do not shoot.
7. Shoot only at targets that are thick enough to stop your arrow. Do not shoot if there is any chance your arrow might ricochet (bounce off) from the target or other object and hit someone.
8. Use arrows that are the proper length for you. Arrows that are too short can cause serious injury.
9. Never shoot an arrow up into the air.
10. Walk, do not run, on the archery range. If you run, you might accidentally cross in front of another group of archers, step on arrows lying on the ground, or fall and trip into a target and be injured by the arrows sticking out of it.
11. When retrieving arrows from behind a target, particularly on a field range or at an isolated target, lean your bow against the face of the target or stick an arrow in the top of the target with the fletching up. This will warn other archers that you are behind the target.
12. Always use proper safety equipment, including an arm guard, a finger tab or glove, quiver and a bow sling if one is on the bow.
13. Always inspect your equipment before shooting. Repair or replace damaged equipment. Replace the bowstring when it becomes worn.
14. Always have an arrow on the string when shooting a bow. Dryfiring (shooting a bow without an arrow) can seriously damage a bow and possibly injure the archer. Never dryfire a bow.
15. Always listen to the Range Master and follow his or her commands.



BOW HUNTER'S CREED

I will:

- Keep a clean and safe camp.
- Put out my campfire.
- Be a safe and cautious hunter.
- Only shoot at game within accurate range.
- Help the novice become a better hunter and sportsman.
- Cooperate with game and forest service officials.
- Abide by and help enforce hunting regulations.
- Use good hunting equipment and keep my broadheads razor-sharp.
- Cooperate with landowners by closing gates and being considerate of their property, and always ask for permission to enter.

Equipment Needed for this Project:

Bows

Bows are made of wood, fiberglass, and metal (aluminum or steel).

Weight Guideline

3–6 grades, weight is 15–20 pound bow

7–9 grades, weight is 25–30 pound bow

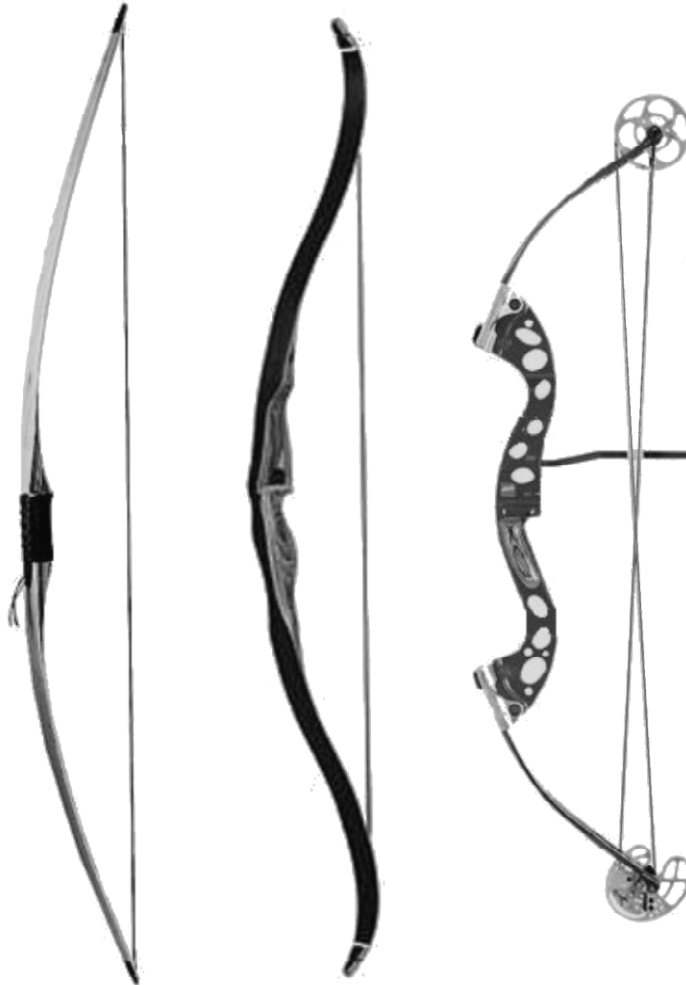
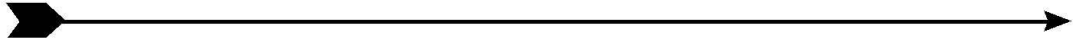
10–12 grades, weight is 35–40 pound bow (or greater)

It is always better to shoot a bow of lesser draw weight than to be overbowed.

An archer should be able to hold a bow at full draw for 7–10 seconds comfortably.

Kinds

- *Straight limb or long bow*—simplest bow made, no gimmicks attached. It has a smooth pull and flat trajectory. Some archers feel it offers steadier, more accurate shooting.
- *Recurved*—this gives a smoother draw and added speed to the arrow.
- *Compound*—(2- and 4-wheel) these bows shoot the arrows the fastest and are easiest to hold at full draw. The compound bow “lets off” is between 0% to 85% of its “peak” draw weight to its holding weight, so one can have 60 pounds of power, but is actually only holding close to 30 pounds, depending on the percentage.



Straight

Recurved

Compound

Target Arrows

Materials are wood, fiberglass, aluminum, and carbon.

Beginners usually begin with aluminum or wood. Arrows must be of suitable length for your draw. At a full draw, the point of the arrow, the complete point, should extend just beyond the back of the bow, or one inch beyond the arrow rest.

How To Measure Length

There are three methods of measuring length:

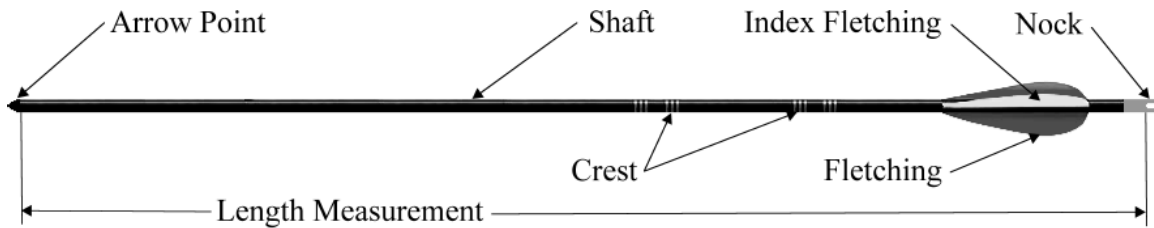
- Stretch both hands out in front of your body with palms together. Measure from tip of fingers to your chest. This is the length of arrows needed.
- Stretch both arms out at shoulder height. Measure total distance between finger tips. If spread measurement is 57"–59" arrow length should be 22"–23". If 60"–62", arrow length is 23"–24". If 63"–65" arrow length is 24"–25", etc.
- The best way to determine correct arrow length is to draw a special measuring arrow that has been marked every inch, like a ruler. Then when you are at full



draw, your correct arrow length is read from the marked arrow, where it crosses the back of your bow, or one inch greater than the distance of the arrow rest.

You will need a matched set of arrows (arrows identical in length and spine to each other) for tournament shooting.

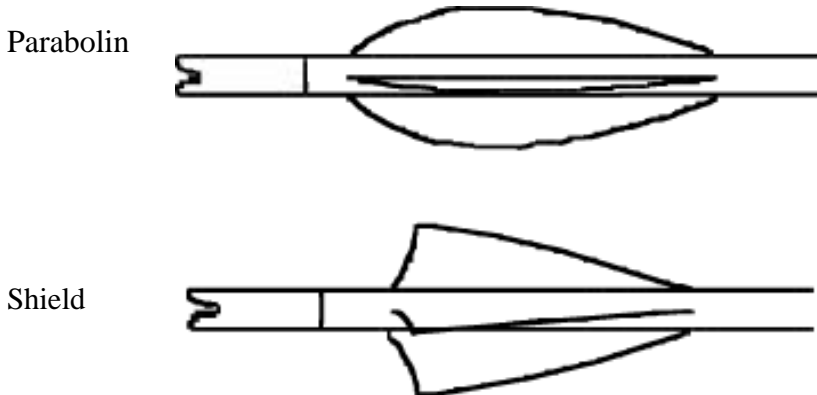
Parts of the Arrow



Feather Shapes

The feathers help determine the stability and noise of the arrow while in flight.

The two most used cuts are:



Safety Equipment

Arm guard -- to protect your forearm from the bowstring and a possible broken arrow. It also provides a smooth surface for the string to strike, preventing the improper flight of the arrow.

Finger or Bow Sling -- to prevent the bow from dropping to the ground once an arrow has been shot. Using a finger sling or bow sling helps the archer in achieving a smooth release of the arrow.

Release Aid or Mechanical Release -- keeps the shooting fingers from touching the bow string and helps the archer to deliver a smooth release of the arrow.

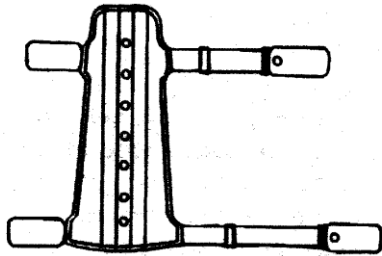
Finger Tab -- to protect the three “shooting” fingers and provide for a smooth release.



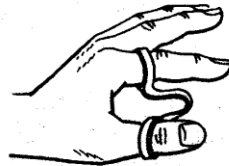
Ground Quiver -- to prevent your arrows from getting under your feet while shooting and to hold your bow while retrieving your arrows.

Chest Protector -- to protect the upper body from string slap and to help prevent the string from catching on your clothing.

Side Quiver -- to prevent your arrows from getting under your feet while shooting, and to provide a means of carrying arrows from the target back to the shooting line.



Arm Guard



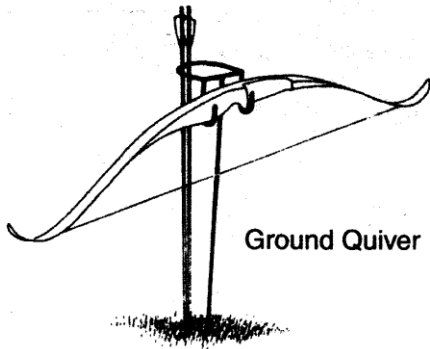
Finger Sling



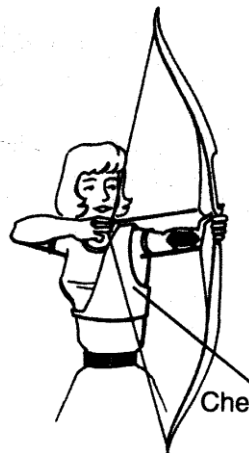
Release Aid



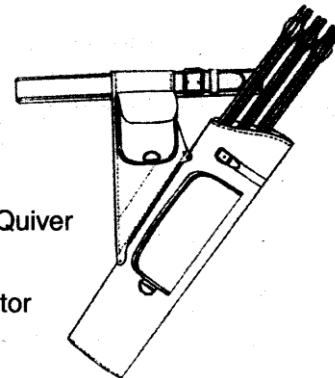
Finger Tab



Ground Quiver



Chest Protector



Side Quiver

Shooting the Bow

Refer to the *NAA USA Archery Level 1 Basic Archery Instructor Course*, or *Boy Scouts Of America Merit Badge Series*, for instructions on shooting and care of your bow. Each member and leader should have a copy of one of these handbooks.

Archers must follow the Steps to shooting to achieve a smooth release of the arrow. Before you release, run a quick mental check of all the other steps. If everything is right, release, and you will see your arrow strike the mark.



PUBLIC PRESENTATIONS (DEMONSTRATIONS)

A public presentation is showing and telling how to do something. You will learn many things in your 4-H Archery Project that you can share with others through different kinds of demonstrations. Public presentations may be given individually or with a teammate. Here are some good ideas for public presentations:

- How to string a bow.
- How to stand when shooting.
- How to nock, draw, and release an arrow.
- How to aim with a bow and arrow.
- How to draw arrows from a target.
- How to score an archery match.
- How to select a bow.
- How to select arrows.
- How to store, carry, and care for a bow and arrows.

EXHIBITS AND DISPLAYS

Your club may be invited to prepare a window display or an exhibit for a 4-H Achievement program or your community or county fair. You might include posters showing the history of archery, safety, shooting techniques, wildlife conservation, pictures, and equipment.

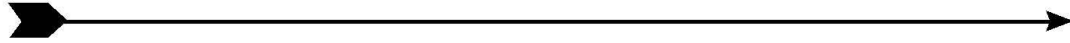
An archery display should visually explain some technique or process related to archery, such as:

- Why the weight and spine of an arrow must be matched to the weight and cast of the bow.
- The use of aiming points in relation to trajectory.
- The history of archery and its importance to the development of civilization.
- How to fletch an arrow.
- How to make a bow string.
- How to determine the length of arrows needed by an archer.
- How the bow has develop through the ages.
- Archery games.

4-H ARCHERY ADVANCEMENT PROGRAM

The 4-H Archery Advancement program will:

- Help you learn more about archery.
- Help you improve your shooting skill and score.
- Give you credit for extra work done.
- Allow you to advance at your own pace.



Your progress in the Advancement Program will become a part of your 4-H Record Book. As you complete each requirement, fill in the date and have your Teen Leader, parent or Leader initial it. When you have completed the required jobs for each step, you will receive a 4-H Archery Advancement certificate. Study each requirement carefully and do your work well. Good luck!

4-H Junior Bowman

<i>Step 1</i>	Date Approved	Passed by
1. Draw a diagram of an arrow and label the following parts: point shaft, crest, fletching, index fletching, and nock.	_____	_____
2. Draw a diagram of a strung bow and label the following parts: tip, string notch, back, face or belly, handle, arrow rest, bowstring, serving and nocking point.	_____	_____
3. Define, describe, and/or explain the purpose or use of these archery terms: arm guard, index fletching, crest, draw, nock (arrow nock, and to nock an arrow), overbowed, overdraw, petticoat, quiver.	_____	_____
4. Learn and practice the “General Archery Safety Rules.”	_____	_____
5. Demonstrate (show and tell) how to string a bow.	_____	_____
6. Demonstrate how to nock, draw, and release an arrow safely.	_____	_____
7. Shoot 30 arrows at 9 meters and record your score. Use 60-cm 10-ring target. Score at least 130 Bare Bow (B.B.), or 150 Free Style (F.S.). Score: _____	_____	_____

_____ has completed all requirements and is approved for advancement to the rank of 4-H Junior Bowman.

Approved by _____ Date _____



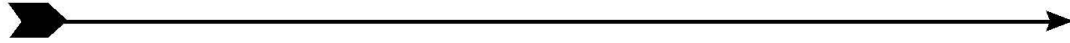
4-H Bowman

Step 2

	Date Approved	Passed by
1. Be a qualified 4-H Junior Bowman and continue to observe the "General Archery Safety Rules."	_____	_____
2. Define, describe, and/or explain the purpose or use of the following archery terms: anchoring, arrow rest, barebow, blunt, cast, creep, end, field arrow, freestyle, recurved bow, compound bow, spine, stance, vane, weight (bow weight, arrow weight).	_____	_____
3. Read a book, story, or article about archery, bow hunting, or wildlife, and report to your club. Tell what happened in the story and what you learned about archery, sportsmanship, and wildlife.	_____	_____
4. Explain and demonstrate "bow sighting" or "point of aim" sighting.	_____	_____
5. Explain the proper care and storage of the bow, bow string, and arrows.	_____	_____
6. Complete one elective from each group of 4-H Archery Electives, pages 10-13.	_____	_____
7. Shoot 30 arrows at 9 meters and record your score. Use 60-cm 10-ring target. Score at least 180 Bare Bow (B.B.), or 200 Free Style (F.S.). Score: _____	_____	_____

_____ has completed all requirements and is approved for advancement to the rank of 4-H Bowman.

Approved by _____ Date _____



4-H Junior Archer

Step 3

	Date Approved	Passed by
1. Be a qualified 4-H Bowman and continue to observe the “General Archery Safety Rules.”	_____	_____
2. Define, describe, and/or explain the purpose or use of these archery terms: bow sight, broad head, clout shooting, flight arrow, flight shooting, overstrung and understrung, range finder, trajectory.	_____	_____
3. Explain the “Steps of shooting” and why they are important. Demonstrate all the steps	_____	_____
4. Learn the advantages and disadvantages of the flight, field, hunting, fishing, flu-flu, and target arrows. Explain why arrows are made from different materials, fiberglass, carbon, aluminum, and wood.	_____	_____
5. Explain how a compound bow functions	_____	_____
6. Do two electives from each group of 4-H Archery Electives on pages 10–13	_____	_____
7. Shoot 30 arrows at 18 meters and record your score. Use 60-cm 10-ring target. Score at least 130 Bare Bow (B.B.), or 150 Free Style (F.S.). Score: _____	_____	_____

_____ has completed all requirements and is approved for advancement to the rank of 4-H Junior Archer.

Approved by _____ Date _____



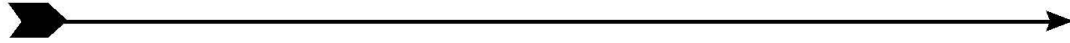
4-H Archer

Step 4

	Date Approved	Passed by
1. Be a qualified 4-H Junior Archer and continue to observe the "General Archery Safety Rules."	_____	_____
2. Define, describe, and/or explain the purpose or use of these archery terms: pile, quartering wind, barbs, grouping, roving, self-bow, and end loop.	_____	_____
3. Do a Public Presentation on Archery at a 4-H event	_____	_____
4. Learn the advantages and disadvantages of the long, reflex, recurved, and compound bows.	_____	_____
5. Help plan, conduct, and score an archery match between two clubs or teams or a tournament for individuals.	_____	_____
6. Participate in a tournament and demonstrate good sportsmanship.	_____	_____
7. Do two electives from each group of 4-H Archery Electives on pages 10–13	_____	_____
8. Shoot 30 arrows at 18 meters and record your score. Use 60-cm 10-ring target. Score at least 180 Bare Bow (B.B.), or 200 Free Style (F.S.). Score: _____	_____	_____

_____ has completed all requirements and is approved for advancement to the rank of 4-H Archer.

Approved by _____ Date _____



4-H Master Archer

Step 5

	Date Approved	Passed by
1. Be a qualified 4-H Archer and continue to observe the “General Archery Safety Rules.”	_____	_____
2. Define, describe, and/or explain the purpose or use of these archery terms: creep, cant, clout, brace, windage, drift, and point blank.	_____	_____
3. Shoot and list scores for the following tournament rounds. Each round must be shot without a break, except for a brief rest if needed. Junior Easton Round (NAA)(600) _____ Freeman Round (NFAA)(300) _____ Field Round (FITA)(780) _____ Indoor Round (NAA)(300) _____ Junior 900 Round (NAA)(900) _____	_____	_____
4. Serve as a teen leader and help others in the club learn and enjoy archery.	_____	_____
5. Demonstrate and explain “Instinctive Shooting” and why one would shoot this way.	_____	_____
6. Participate in a 4-H State Archery Tournament and demonstrate good sportsmanship	_____	_____
7. Do two electives from each group of 4-H Archery Electives on pages 10–13	_____	_____
8. Shoot 30 arrows at 18 meters and record your score. Use 60-cm 10-ring target. Score at least 230 Bare Bow (B.B.), or 250 Free Style (F.S.). Score: _____	_____	_____

_____ has completed all requirements and is approved for advancement to the rank of 4-H Master Archer.

Approved by _____ Date _____

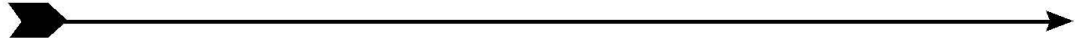


4-H Bow Hunter

<i>Step 6</i>	Date Approved	Passed by
1. Be a qualified 4-H Master Archer and continue to observe the "General Archery Safety Rules."	_____	_____
2. Learn what special precautions and preparations a bow hunter makes concerning dress, equipment, stalking game, and the procedure after hitting an animal.	_____	_____
3. Learn the state regulations for hunting with a bow and arrow (available from Washington State Game Commission).	_____	_____
4. Read about and/or observe some game animal, bird, or fish and report to your club.	_____	_____
5. Know vital target areas for killing animals with an arrow.	_____	_____
6. Learn and practice the "Bow Hunter's Creed."	_____	_____
7. Go bow hunting for game or unprotected animal, bird, or fish with your bow and arrows.	_____	_____
8. Do two electives from each group of 4-H Archery Electives on pages 10-13	_____	_____

_____ has completed all requirements and is approved for advancement to the rank of 4-H Bow Hunter.

Approved by _____ Date _____



Archery Electives *Archery*

1. Read a story, article, or book on archery and report to your club. (This elective may be repeated by reading different articles.)
2. Organize and lead an archery game.
3. Make a set of arrows. You may purchase parts. They should be suitable for your bow and draw.
4. Make a bow string.
5. Demonstrate how to adjust the brace height or fistmele of a bow.
6. Make a finger tab.
7. Make a quiver.
8. Make a butt or mat.
9. Make an archery target.
10. Set up an archery range at your home.
11. Attach a bow sight to your bow and learn how to use it.
12. Practice clout shooting until you are reasonably accurate.
13. Participate in a field archery match or tournament.
14. Prepare an Archery Quiz for your club to take. (20 questions)
15. Design and make a self-bow.
16. Design your own archery elective(s):

Archery Electives *Outdoorsmanship*

1. Participate in a community, roadside, campground, or stream bank cleanup. (This elective may be repeated.)
2. Make a map that will show someone else how to get to one of your favorite places.
3. Complete a five-mile hike.
4. Complete a ten-mile hike.
5. Demonstrate how to determine directions without a compass.
6. Build a safe campfire and put it out.
7. Make an overnight hike and camp where you must carry everything you need for at least one mile.
8. Cook a meal over a campfire for yourself and one other person.
9. Go hunting with a parent or friends and make a report about wildlife you saw.
10. Volunteer to be a 4-H camp counselor.
11. Give a public presentation on how to pack a backpack for an overnighter.
12. Give a talk about safety and survival in the woods.
13. Design your own elective(s) on outdoorsmanship:

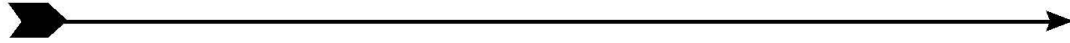


Archery Electives *Personal Development*

1. Lead the “Pledge of Allegiance” and “4-H Pledge” at a 4-H meeting.
2. Lead a song or a game at a 4-H meeting.
3. Preside at a meeting that includes more than just your 4-H club.
4. Write a news story for a local paper.
5. Give a presentation before a group larger than your 4-H club.
6. Serve as host for a 4-H club meeting at your house. See that everyone is welcomed and made comfortable. Provide refreshments for everyone.
7. Participate in an Archery Tournament outside your 4-H club.
8. Participate in a radio or TV program.
9. Visit several elderly persons in your community and tell them about your 4-H archery activities.
10. Teach several young people in your community how to safely use a bow and arrow.
11. Teach archery at a 4-H or other youth camp.
12. Design your own elective(s) on personal development.

Archery Electives *Wildlife Study and Conservation*

1. Read about and/or observe and report on some wild animal, bird, or fish. (This elective may be repeated.)
2. Find and identify the tracks of five wild animals.
3. Observe and identify ten birds.
4. Find and identify ten native forest trees.
5. Find and identify ten wildflowers or other forest plants, not trees.
6. Find and identify ten kinds of aquatic animals such as crayfish, mussels, water striders, starfish, salamanders.
7. Collect and identify ten insects, ten plants, ten leaves, or ten shells.
8. Explain igneous, sedimentary, and metamorphic rocks.
9. Explain how some land feature such as a hill, canyon, or lake was formed.
10. Build a birdhouse or bat house and put it up in a good place.
11. Show slides of some wildlife at a 4-H meeting.
12. Plant ten trees and care for them.
13. Visit a wild bird refuge and make a report about your visit at a 4-H meeting.
14. Design your own elective(s) on wildlife and conservation:



COMMON ARCHERY TERMS

ANCHOR POINT—A spot on the archer's face, chin, or cheek to which the archer habitually draws the bowstring.

ARM GUARD—A piece of leather or stiff material worn on the forearm to protect it from injury by the bowstring or a broken arrow.

ARROWHEAD—The point or tip of an arrow, particularly when fashioned for hunting.

ARROW PLATE—A piece of material that is glued to the side of the bow at the point where the arrow contacts it. It provides protection for the bow from the friction of the arrow.

ARROW REST—A small protrusion on the bow at the point where the arrow will rest during the draw.

BACK—The side of the bow away from the archer.

BACKED-BOW—A bow with a strip of other material glued to its back to give it greater strength or cast.

BARBED ARROW—An arrow with barbs designed for hunting and fishing so it will not come out. Illegal for hunting game birds or animals in Washington State, but may be used for bow fishing for carp.

BARBS—The sharp points of an arrowhead that project backward.

BAREBOW—A bow without a bowsight.

BARRELLED ARROW—An arrow that is larger in the middle than at the ends.

BELLY OR FACE—The side of the bow toward the archer.

BLUNTS—Blunt-tipped arrows often used for small game.

BOW ARM—The arm that holds the bow while shooting.

BOW REEL—A reel attached to the bow for bow fishing.

BOW SIGHT—An aiming device attached to the bow or bowstring.

BOW STRING—String of a bow, usually made of dacron.

BOWYER—A maker of bows.

BRACE—To string a bow; to place the loops of the bowstring in the nocks of the bow.

BRACE HEIGHT—The distance between the handle of the strung or braced bow and the bowstring; fistmele.

BROAD HEAD—A hunting point with two or more cutting edges.

BUTT OR MAT—A backstop usually made of straw, cedar tow, or sod on which the target is placed.

CANT—To hold the bow tilted or slightly turned while shooting.

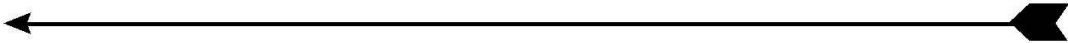
CAST—The force and speed imparted to the arrow by the bow.

CLOUT—A white object such as a cloth placed on a stake as a mark for long-range shooting.

INDEX FLETCHING—Usually a different color; should be upright or away from the bow when the arrow is nocked, except on some compound type arrow rests.

CREEP—To let the arrow slide forward on the arrow rest before releasing.

CREST—Painted bands on arrows for identification.



CROSSBOW—A bow fixed on a stock that has a groove or barrel to direct the arrow, a notch or catch to hold the bow string, and a trigger to release the string. Illegal for hunting during bow season in Washington State.

DRAW—The act of pulling back the bowstring.

DRAWING ARM—The arm that draws the bow string.

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

END—A group of arrows (usually 3 to 6) shot consecutively at a target.

END LOOP—The part of the string fitting over the bow nock.

FIELD ARCHERY—Shooting arrows at targets at varying distances over different types of terrain, usually in woods or courses similar to golf courses. Targets may be bulls-eyes and/or animal types.

FIELD ARROW—A heavy duty arrow adaptable for hunting.

FINGER TAB—A piece of leather or other material used to protect the three fingers used on the bowstring.

FISTMELE—An old English term that measured the distance between bowstring and bow handle when strung, but not drawn. Today's term is String Height.

FLETCH, FLETCHING—(1) To attach feathers or plastic vanes to an arrow; (2) feathers or guiding vanes on an arrow.

FLIGHT BOW—A strong bow used to shoot a great distance.

FLIGHT SHOT—A shot for distance.

FREESTYLE—Using a bow sight; a tournament classification allowing the use of a bow sight.

GROUPING—A close clustering of arrows on the target.

GROUND QUIVER—Heavy wire shaft with a loop at the top or other device to hold arrows while target shooting, and to hold the bow while retrieving arrows from the target.

HANDLE—The rigid center portion of the bow which is held when shooting.

HEAD—Point or tip of the arrow.

HOLDING—Keeping an arrow at full draw while aiming.

INSTINCTIVE SHOOTING—Shooting without a sight, aiming with both eyes on the target, used for quick shooting.

JOINTED BOW—A bow whose limbs are joined at the handle; may be separated or folded for carrying and storing.

KICK—A bow is said to “kick” when a jar is felt after a shot.

KISSING BUTTON (KISSER)—An object on the string of a bow. It is used by sight shooters to establish a better anchor point. The object is touched with the lips when holding.

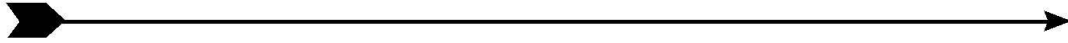
LAMINATED BOW—One made of several strips of different materials and glued together.

LIMB—Working (flexible) portion of bow, called upper and lower.

LONGBOW—A straight bow five or more feet long, not a recurved nor a crossbow.

LOOSE—To release or shoot a drawn arrow.

N.A.A—National Archery Association



N.F.A.A.—National Field Archery Association

NOCK—(1) Grooves at the ends of the bow which hold the bow string, sometimes referred to as bow notch. (2) the groove at the end of the arrow into which the bow string is fitted, (3) to place the arrow in position to shoot with the bowstring in the nock of the arrow.

OVERBOWED—Using a bow beyond one's strength.

OVERDRAWN—Drawn too far, said either of the bow or arrow.

OVERSTRUNG—Using a bow that has too great of a brace height. (Too short of a string.)

PETTICOAT or SKIRT—The portion of the target outside of the scoring area.

PILE—The head, tip, or point of an arrow.

POINT BLANK—Aim taken at a distance where the point of the arrow is in line with the archer's eye and the center of the target.

POINT OF AIM OR AIMING POINT—(1) A small object placed on the ground between the bowman and the target. When the tip of the drawn arrow is in line with the bowman's eye and the aiming point, it should be on target. The aiming point is moved until the arrows hit the target. Used in practice to develop uniform position and release, and for lawn archery. (2) Any object above or below the target on which the bowman sights.

QUARTERING WIND—A wind blowing obliquely (sideways) across the target.

QUIVER—A holder or sheath for carrying arrows.

RECURVED BOW—A bow with tips that curve back in an arc; curvature usually 10–12 inches from end.

REFLEXED BOW—A bow which when unstrung bends in the opposite way to its curve when strung.

RELEASE—To loose (shoot) an arrow from a drawn bow.

ROUND—A prescribed number of arrows, ends and games, shot at prescribed distances.

ROVING—Shooting a specified range at random objects at unknown distances.

SELF-BOW—A bow made of a single piece of wood, not laminated or backed.

SERVING—A wrapping of thread around the bowstring at points of wear.

SHOOTING LINE—The line the archer straddles when shooting.

SIGHT—(1) To aim; (2) a device placed on the bow string and/or how to enable the archer to aim directly at the target.

SIGHT WINDOW—The opening provided by an offset section of the bow to allow the arrow to point straight ahead.

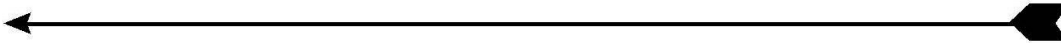
SPINE—The stiffness of an arrow. Arrows should be matched in stiffness to the weight or cast of the bow.

TOXOPHILITE—One who loves, studies, and practices archery; one who studies the history and archaeology of archery.

TRAJECTORY—The path of an arrow in flight.

WEIGHT—The force (strength) required to draw the bow the length of the arrow, usually 28 inches.

WINDAGE—(1) The influence of the wind on an arrow in flight; (2) the extent of such deflection; (3) same as drift.



ROUNDS

Freeman Round (NFAA)

This round consists of 60 arrows shot as three games at distances of 9, 13.5, and 18 meters (10, 15, and 20 yards). Each game includes four ends of five arrows.

First Game—Three ends at 9 meters (10 yards); one end at 13.5 meters (15 yards).

Second Game—Three ends at 13.5 meters (15 yards); one end at 18 meters (20 yards).

Third Game—Four ends at 18 meters (20 yards).

The target is the standard NFAA indoor target of 40 centimeters with a blue-and-white face and an 8-centimeter center ring, scored 5, 4, 3, 2, 1.

Indoor Round (NFAA)

This consists of 60 arrows shot as three games at a distance of 18 meters (20 yards). Each game has four ends of five arrows per end. The target and scoring are the same as in the NFAA Freeman Round.

900 Round (NAA)

This is an outdoor target round. The course is set up in an open area. A 122-centimeter (48-inch) five-color target with 10-ring scoring is used. Scoring, from center out, is 10-9-8-7-6-5-4-3-2-1. The distances and number of arrows are:

30 arrows at 60 meters

30 arrows at 50 meters

30 arrows at 40 meters

They are shot in “ends” of six arrows. This means the score is checked after each end of six arrows have been shot.

Junior 900 Round (NAA)

This is similar to the 900 round. The target face and scoring are the same; the distances are shorter. Distances and numbers of arrows are:

30 arrows at 50 meters

30 arrows at 40 meters

30 arrows at 30 meters

Easton Round (NAA)

A 122-centimeter (48-inch) target is used with 10-ring scoring. It is shot in ends of five arrows.

20 arrows at 60 meters

20 arrows at 50 meters

20 arrows at 40 meters

Junior Easton Round (NAA)

A 122-centimeter (48-inch) target is used with 10-ring scoring. It is shot in ends of five arrows.

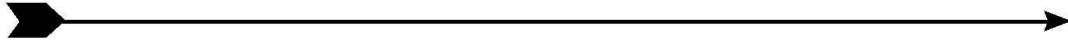
20 arrows at 50 meters

20 arrows at 40 meters

20 arrows at 30 meters

Field Round (FITA)

Go to a certified archery range and shoot its course. This course is set up in the woods and takes a lot of space.



Archery Related Web Sites

<http://4-h.wsu.edu/projects/shooting.htm>

<http://www.4-hshootingsports.org>

<http://www.usarchery.org>

<http://www.archery.org/clients/fita/web/website.nsf>

<http://www.nfaa-archery.org>

<http://www.crispie.com/wsaa>

<http://www.nasparchery.com/activea.asp>

<http://students.washington.edu/archers>

<http://www.communityarchery.com/SchoolArcheryInsightFinalLowRes.pdf>

<http://www.archerytrade.org>

<http://www.skookumarchers.com>

http://www.archersreference.pwp.bluevonder.co.uk/archref_05.pdf

Appreciation is extended to Kim Petersen and Sandra Wilson of, Kitsap County, for editing and testing these materials. Alternate formats of our educational materials are available upon request for persons with disabilities. Please contact the information Department, College of Agriculture and Home Economics.

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