

2012



ARCHERY 101

FUNDAMENTALS OF ARCHERY

During the course the Instructor will review, archery safety, shooting form, and types of equipment.

Archery 101

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Course Curriculum

This Archery 101 course consists of four sessions, each being one hour. Archery 101 introduces archery safety, shooting form, archery styles, equipment and scoring rules. Each session offers “show and tell” discussion for fundamental archery education. The majority of each class is just a lot of FUN shooting, but with structured drills and practice, along with skills. Students learn a neutral style of archery that builds the basics of a solid shooting form. Easy to use equipment allows skill progress, without emphasis on strength or gender.

The program curriculum uses the JOAD/AAA training and awards system, a nationally recognized archery program developed by USA Archery and the international FITA “Feathers and Arrows” archery education program. This combination is the first step in a “black belt” style, self-paced, achievement program in target archery. Regular group classes combine fundamental archery education curriculum and shooting skill development. Along the way to completion, the archer will achieve three award pin levels: Green, Purple and Gray. Each has a shooting proficiency test and education curriculum.



Outdoors, 36-Arrow Round

36 Arrow Rounds 122cm Face	Green Star	Purple Star	Gray Star	White Star	Black Star	Blue Star	Red Star	Yellow Star	Bronze Olympian	Silver Olympian	Gold Olympian
<i>Distance</i>	15m	20m	25m	30m	40m	50m	50m	60m/70m	60m/70m	60m/70m	60m/70m
<i>Novice</i>	130	155	180	205							
<i>Olympic Outer 10 Ring</i>	155	180	205	230	240	240	275	290/270	310/295	325/305	335/320
<i>Compound Outer 10 Ring</i>	180	205	230	245	265	265	300	310/300	335/325	350/335	355/340

Indoors, 30-Arrow Round

Distance & Face	Green Star	Purple Star	Gray Star	White Star	Black Star	Blue Star	Red Star	Yellow Star	Bronze Olympian	Silver Olympian	Gold Olympian
<i>9 Meters Olympic & Novice-60cm Compound-40cm</i>	50	100	150	200							
<i>18 Meters Olympic & Novice-60cm Compound-40cm</i>		30	50	100	150	200	250	270	290	295	300
<i>18 Meters Olympic-Outer 10 Compound-Inner 10</i>							240	260	280	285	290

Introduction

Welcome to Archery! Through the ages, this primitive weapon has fed families, conquered civilizations, and provided a wonderful source of recreation. As a martial art, archery helps build self-confidence and control. As a sport, it ranks with golf as a challenge to building individual skill.

There are many models and manufacturers of archery equipment. There are also many styles, or forms of archery developed around two basic methods of shooting - using sights, and not using sights. Mechanical sights rely on the fine adjustment of equipment paired to the archer and the appropriate distance from the target to be shot. Archery without sights is an instinctive style, using a point-of-aim view at the target. This is similar to the difference between using a rifle with a telescopic scope, and a shotgun, just looking down the barrel to aim.

Instinctive is our preferred method for beginners. It is the simplest method for handling the equipment and developing good shooting form and consistency. It lays a practical foundation for the pursuit of archery in any discipline.

Archery History

Experts believe the bow and arrow are one of the three most important inventions in human history – right alongside the discovery of fire and the development of speech. Once, sticks and stones were man’s only weapons against bigger, stronger and faster predators. But armed with the bow and arrow, man suddenly became the most efficient hunter on Earth, able to shoot his prey accurately from a safe distance. The bow and arrow gave humans greater protection, a diet richer in protein, and also a more abundant supply of the raw materials like bone, sinew and hide, upon which early man depended for survival.

The bow and arrow were crucially important to man’s survival at one time. Even though guns replaced bows as a weapon almost 400 years ago, archery has evolved as a sport because it is now a unique and rewarding challenge. There are now at least five million archers in the English-speaking world.

Today, the “twang” of the bowstring can be heard at schools, municipal parks, club ranges and in the programs of various youth groups. The reasons for this popularity are simple. It is a sport that can be practiced at any time of the year, indoors or out, in any part of the world, with friends or alone. It is relatively inexpensive. Unlike athletes in many other sports, an archer can improve with age, since endurance and skill are far more important than brute strength. Archers in their 80s have won competitions!

Primitive cave paintings, such as those discovered in Eastern Spain, prove that man has hunted with a bow and arrow for at least 12,000 years. Ancient arrowheads found at Bir-El-Atir in Tunisia date back even further, some as early as forty thousand years ago.

3500 BC: The ancient Egyptians used two kinds of wooden longbows, the simple one-piece or “self” bow and the double recurve type. They also used the shorter composite bows, made of Oryx horn and wood. Many of these bows were imported from master bowyers in Syria and Asia Minor. The Egyptians’ leaf-shaped and diamond shaped arrowheads were made of flint and later bronze.

1700 BC: The Assyrians, who dominated the Middle East for centuries, were the first to use mounted archers. Their powerful composite bows were uniquely triangular in shape and short enough to be easily handled by archers on horseback.

1200 BC: The Hittites’ skillful use of archery from chariots was an effective form of mobile warfare. Their light, fast chariots enabled them to out-manuever and out-shoot their opponents in many Middle Eastern battles.

100 BC: Although the Romans were great soldiers, unparalleled in hand-to-hand combat, they were ineffective archers. To compensate for this, they hired professional bowmen from nations within their frontiers, who fought under the Latin name: Cohortes Sagittariorum.

AD 100: The Parthians were Asiatic horse-archers who invented the art of twisting around in the saddle and shooting backward while at full gallop. Known as the “Parthian Shot,” this acrobatic maneuver enable the lightly armored Parthians to ride swiftly through enemy ranks, shooting arrows in any direction.

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AD 1066: The Vikings introduced the longbow to the French when they settled in Normandy in the 8th century. The Normans became expert bowmen, and the archers led by William, Duke of Normandy, use the longbow to defeat King Harold's Saxon army at the Battle of Hastings in 1066. The superiority of the longbow persuaded later generations of Englishmen to adopt it as their main weapon.

AD 1200: The Mongols, armed with powerful composite bows and iron-tipped arrows, conquered most of the world known to them. All of Asia and Europe trembled before these fierce, disciplined, nomadic horse-archers, who, led by the military genius, Genghis Khan, perfected the art of mobile warfare.

AD 1400: English archers, shooting the mighty longbow and "cloth yard" (37 inches) shafts, gained everlasting fame and respect in the 13th and 14th centuries by defeating the French in such historical battles as Crecy, Potiers and Agincourt.

AD 1600: The bow and arrow began as a weapon in ancient Japan, but by the 17th century, had evolved into a ceremonial archery or kyudo. Still very much a tradition, archers shoot arrows that are one meter long, and bows that are often seven feet or more in length and asymmetrical in shape.

Early tournament archery

By the time of the 17th century in England, lead bullets and gunpowder had replaced the bow as a weapon, but there were still large numbers of trained archers, and interest in the bow remained strong. Fairs and festivals included contests that captured the fun and challenge of archery. Archers competed by shooting balls tossed in the air, by shooting for distances or shooting arrows into and through armored shields. Tournaments were held, and target archery evolved as a competitive sport. In 1781, the Toxophilite Society was formed. Women wanted to join men in archery competitions and in 1787, the Royal British Bowmen became the first archery society to admit female contestants.

But the British weren't the only people interested in competitive archery. Many countries in Europe and Asia also included archery in their national sports. In Turkey, the Archery Guild – founded in 1453 – set aside large areas for distance for "flight" shooting. Incredible distances were shot and recorded on stone markers. The farthest distance occurred in 1798 when Sultan Selim shot a flight arrow 972 yards and two inches – a record that stood until as recently as 1968.

In the United States, the Civil War was partly responsible for the rise in interest in archery. After the war, Confederate soldiers were not permitted to own firearms. This forced two veterans, brothers Will and Maurice Thompson to learn to hunt with a bow and arrow. Maurice's book, *The Witchery of Archery*, described their hunting exploits and captured their love of the sport. The book was widely read and interest in archery spread throughout the country. In 1879, the Thompsons helped organize the National Archery Association, and Maurice was elected president. The first tournament was held the next year. Will won, and he won the following five tournaments as well.

Although an archer – the mystical Greek hero Hercules, supposedly founded the Ancient Olympic Games – archery did not become an official event until the modern Olympics, held in

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Paris, France, in 1900. The French hosts had no standard rules to follow, so they tried to accommodate the different countries' styles and rules. For example, they included an archery event called "la perche," or the Popinjay," which is still popular in France today. The "popinjay" targets are brightly colored "birds" made of feathers tied to the top of a mast. The French won three gold medals in the contest, while Belgium won two and Austria took one.

Archery was also in the next Olympiad, held at the St. Louis Worlds Fair in 1904. Rain turned the tournament grounds into a quagmire, but the determined archers shot anyway. Few foreign archers registered for the tournament and the Americans won all the medals.

Competitors donned their best sporting finery for the 1908 Olympics in England. As the chief archery authority of the host country, the Royal Toxophilite Society set the rules for the competition, which included 25 ladies and 15 gentlemen from Great Britain, 11 gentlemen from France and one American. The rules established by the Society covered more than shooting. Manners on the field were also a concern. For example, rule #8 read: "The gentlemen will not be allowed to smoke at the ladies' targets." Great Britain won six medals that year, France four and the lone American gentlemen, Henry Richardson, returned home with a bronze. Sweden chose not to include archery in the 1912 Stockholm Olympics and in

1916, due to World War I, the Olympics were not held. But in 1920, when the games were held in Belgium, the host country included archery because it was popular there. "Popinjay" was a major event. Not surprisingly, Belgium swept six medals, with the Netherlands, France and England each winning one. After the 1920 Olympiad, archery was not a part of the Olympic Games for more than a half century. Archery enthusiasts, anxious to compete in international tournaments, knew that universal rules needed to be established. The breakthrough came in 1931, when Poland hosted the first international archery tournament, and with the help of France and Poland organized the Federation Internationale de Tir A L'Arc. Now known as FITA, it is the central authority for international archery competition today. Later tournament archery

Later Tournament Archery

By the 1972 Olympics in Munich, FITA rules were recognized throughout the world, and the "FITA round" was adopted for Olympic competition. In the single FITA round, men competitors shot six sets of arrows from distances of 90, 70, 50, and 30 meters; the women, the same number of arrows from 70, 60, 50, and 30 meters. Olympic archers shot two FITA rounds in the four days' competition, and the top three men and women with the highest combined totals were awarded gold, silver or bronze medals, respectively.

This format continued unchanged in the ensuing Olympics, held in 1976, 1980 and 1984. Then, in the 1988 Games, the competition was changed to feature two new rounds – the Grand FITA and Grand FITA Team Event.

The Grand FITA round consisted of an Open Round shot as a FITA round, and the Finals Round, in which the 24 men and 24 women with the highest scores in the Open FITA compete. The Finals Round was an elimination in which archers shot nine arrows from each of four distances of the FITA Round. After 36 arrows, six archers were dropped and those left would move on to the next round. This process of elimination continued until only eight men and eight women remained for the exciting final 36 arrows.

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In the Grand FITA Team Round, teams from each country are made up of the top three archers from the Open Round shooting at the same time. The scoring was cumulative, and the eight best teams in the Grand Finals shot their final arrows starting at the shortest distance.

In 1992, a more challenging round was developed. The 'New Olympic Round' featured match competition among the competitors. During the first two days of the competition, the archers shot a single FITA round as before. The top 32 archers advanced to single elimination match play, shooting one-on-one against their competition. Twelve arrows, shot at 70 meters determined who competed for a medal. A single arrow broke ties closest to the center, in a shoot-off. The new Olympic Round provided spectators with a fast-paced competition that often came down to the last arrow to determine the winner.

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Archery Safety

The sport of Archery takes pride in its safety record. Archery has the lowest incidence of injury of all shooting sports and is the fourth safest of all sports. The reason for this outstanding safety record is that the rules and procedures developed for archery are adhered to by the participants which ensure each person's safety.

Control of all shooting activities is under the direction of the Instructor, sometimes called the Range Officer. Archers must obey their instructions at all times.

Before you begin, ensure that all clothing is held tightly to the body to prevent fouling by bowstrings. Long hair should be tied back for the same reason.

Safety Rules – Archery is a lot of fun, but the fun can quickly turn into a tragedy unless every archer observes the shooting rules. Learn the safety rules and follow them every time you hold a bow or retrieve your arrows. Remember, most accidents are the result of carelessness and thoughtlessness.

1. **Follow the instructions of the Range Officer.** Give attention and listen to the commands given. Ask questions if you do not understand what is said.
2. **Always use proper safety equipment,** including an arm guard, finger tab or glove. The Instructor will ask the youth to reposition their safety equipment to prevent injury if the equipment is incorrectly positioned. If still incorrect, the Instructor will ask the youth if the leader can reposition the equipment.
3. **Always inspect your equipment before shooting.** damaged equipment should be repaired or replaced to avoid injuries. Replace the bowstring whenever it becomes worn.
4. **Always use arrows of the proper length for you.** Arrows that are too short can cause injuries.
5. **Wear snug fitting clothes, tie back long hair, remove large earrings, and clear off any pins or remove anything from chest pockets.** Wear a chest protector as need.
6. **Never "DRYFIRE" your bow.** Always have an arrow on the string when shooting. "DRYFIRING", or shooting a bow without an arrow, can seriously damage a bow.
7. **POINT, DRAW, and AIM your arrow only in the direction of your target.** The arrow must always be pointed down range.
8. **Always aim and shoot only at targets on the range:** Always be sure you know what your target is and that it is safe to shoot. If you're not sure, take a closer look. If you're still not sure, do not shoot. Be sure the area around and behind your target is clear before you shoot. Never shoot if there is a chance your arrow may ricochet from the target or another object and hit someone.
9. **Place your bow in the bow rack once you have finish the end and stand behind the waiting line:** This helps the other archers know your finished shooting your arrows. Bows in a rack cannot accidentally be fired.
10. **Always walk; never run, on the archery range.** If you run, you might accidentally cross in front of another archer, step on arrows lying on the ground, or trip and fall into the target and be injured by arrows sticking out of it.

Range Shooting Commands

Range Shooting Rules – **Follow the commands given by the Range Officer.** If you are not familiar with the commands ask the Range Officer to give both verbal commands and whistle blasts until you are familiar with them.

WHISTLE: TWO BLASTS

VERBAL: "Archers to the shooting line."

VISUAL: Red light is on

Meaning: Pick up the bow and move into position on the shooting line. Do not nock an arrow.

WHISTLE: ONE BLAST

VERBAL: "Begin Shooting"

VISUAL: Green light is on

Meaning: Archers may take the arrows out of the quivers and begin shooting.

WHISTLE: THREE BLASTS

VERBAL: "Clear, walk forward and get your arrows,"

VISUAL: Red light is on

Meaning: Archers have completed shooting. All archers have set their bows down and are standing behind the waiting line. They may now go forward to the target line and pull their arrows.

WHISTLE: FOUR OR MORE BLASTS (series of blasts)

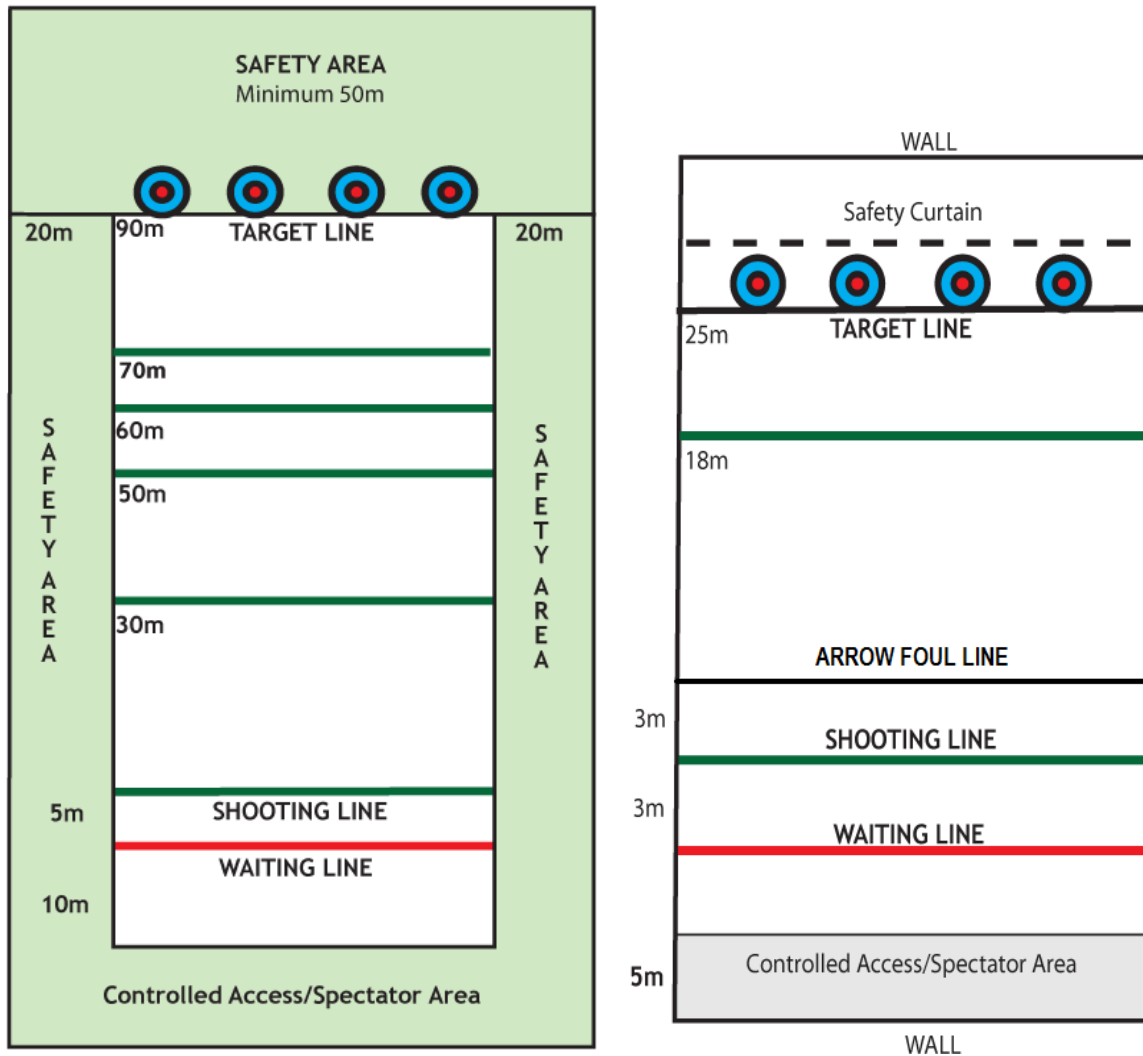
VERBAL: "STOP, STOP, STOP, STOP" or "CEASE FIRE"

VISUAL: Red light is on

Meaning: There is an emergency on the range. Immediately let down and put arrows back in the quiver, and step back behind the waiting line.

Range Configurations

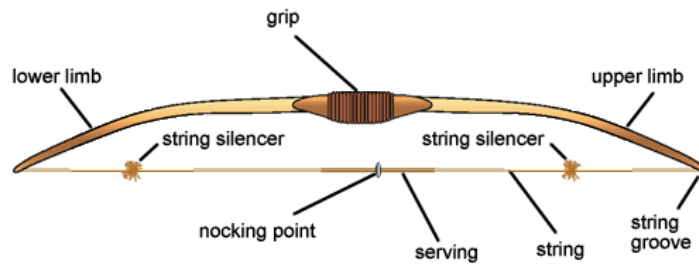
Indoor and Outdoor ranges are configured similarly.



Archery Equipment

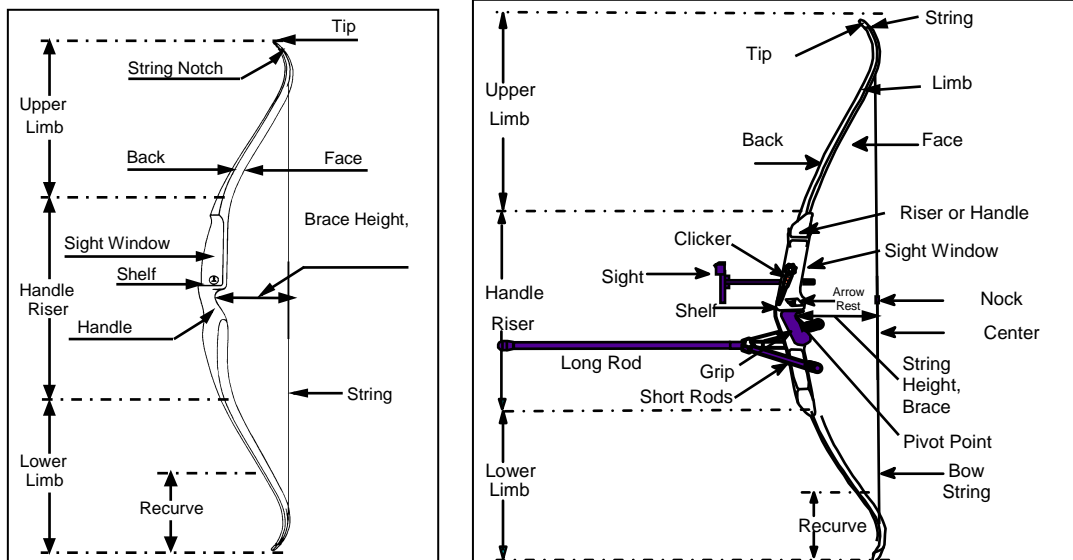
Long Bow

The most traditional type of bow is the longbow. These are the bows that most have seen in the old Errol Flynn-Robin Hood movies. They were made from a single piece of wood. Modern long bows are laminated strips of wood, with a leather-wrapped grip and a string. This type of bow remains very popular among archers that prefer a more traditional experience. A long bow offers many exciting challenges to an archer by keeping the equipment and experience as basic as possible.



Traditional Recurve and Olympic Recurve Bows

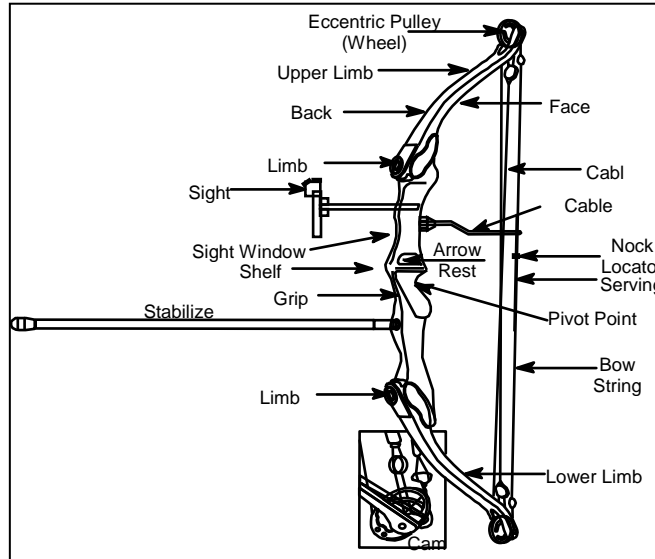
The first evolution of the bow is the recurve bow. The recurve is constructed with limbs that have a curve built into them. This special curve stores more energy in a shorter length limb. The result is increased arrow speed. A recurve can be fashioned from wood or from machined aluminum and also provides a shelf for the arrow to rest on that is centered to provide truer arrow flight. The recurve is the bow of choice for those competing on the international level.



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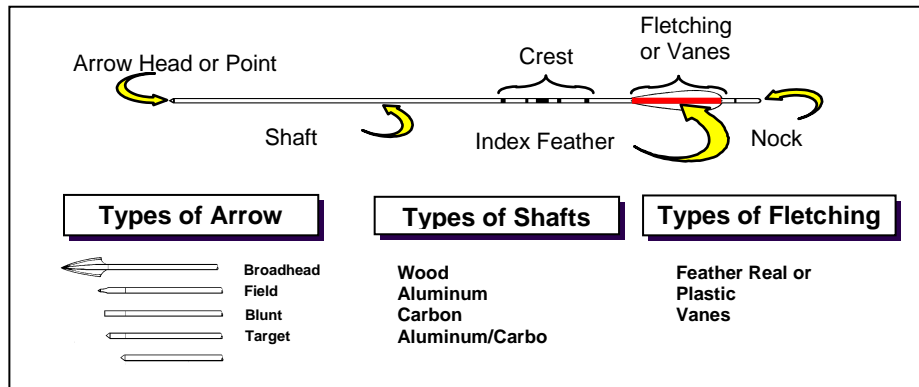
Compound Bows

The most technologically advanced form of the bow is the compound bow. A compound bow has an eccentric pulley or cam mounted at the end of each limb tip. Most compound bows have a let-off. This is a point where the draw weight of the bow is reduced by 60% to 85%, or "let off". This helps the archer remain at full draw for a longer period of time.



Arrows

Selecting arrows is not difficult; it depends on the type of bow and what you are shooting at. There are four types of arrow to choose from. Most traditionalists who use longbows prefer shooting cedar arrows. Recurve and compound shooters may choose from aluminum, carbon, Aluminum/Carbon composite, and fiberglass, depending on your needs.

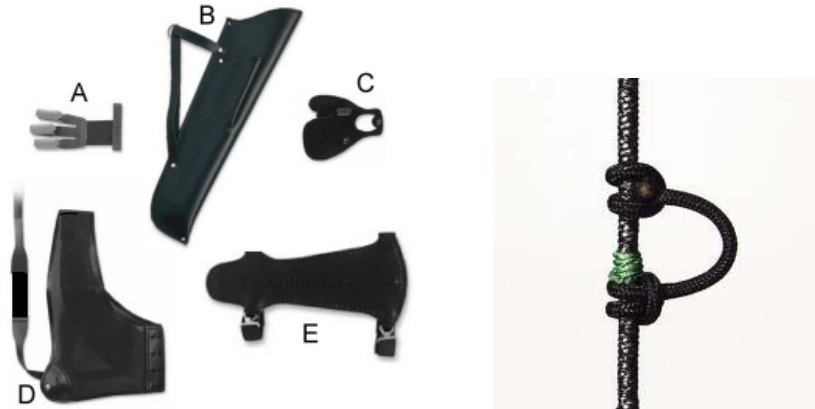


Archery Accessories

There are a few accessories that can be used to help make things a little easier on you. A finger-tab or glove ("C and A") helps protect your finger tips from being chaffed as you draw the string back. An arm

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guard (“E”) is worn on the arm you hold the bow with. It is used to protect your forearm from being struck by the string when you release. A quiver (“B”) hangs from your belt and is used to hold your arrows. A chest protector (“D”) covers a portion of the chest to protect the skin and hold back clothing. For compound shooters, a (“F”) mechanical release is an option. This device clips to the string or “D Loop” attached to the bowstring, and is used instead of your fingers. Once the bow is at full draw, you press a trigger that releases the string.



F. Mechanical release styles:

Hunting: Wrist Strap Trigger

Incorporates an adjustable thumb or Index finger trigger used to release the D-Loop.



Tournament Handle: Thumb Trigger

Incorporates an adjustable thumb trigger used to release the D-Loop.



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Tournament Handle: Rotation or Hinged Back Tension Release

Hinged releases incorporate an adjustable half-moon shape that rotates around a center block with an adjustable clicker letting the archer know when it is ready to release.



Tournament Handle: Resistance Activated/Tension Back Tension Release

The archer draws the release by depressing the trigger and then releases the trigger. While continuing Back-Tension pulling through the shoot, the spring tension releases. All are customizable to the compound bow let-off tension



GETTING STARTED

Instinctive shooting employs the use of your anchor (rear sight), your dominant eye, and the point of the arrow (front sight) to develop a point-of-aim view.

Without bow and arrow, just raise your arm and point your index finger at the target. Focus on the bullseye, with both eyes open, then take turns winking. You will notice your index finger pointing at the bullseye is lined up with one of your eyes, this is your dominant eye and it controls your aim. It is preferable that your dominant eye and hand be the same. If not the same, you can switch hands or close an eye so you are in alignment. Next, you will be replacing your outstretched arm with the arrow, and your pointing index fingertip with the arrow point.



Hold an arrow up now. Touch the nock to the corner of your mouth (anchor) - this is centered under your dominant eye. The arrow shaft rests in your bow hand. See the point on the target. Start by centering the point just below the bullseye. Try to keep both eyes open for your depth perception, but focus only on the target spot you want to hit. You will notice the arrow shaft in your peripheral vision; it is drawing a straight line to your target. When you see the alignment and feel certain you are centered on the target, move closer to the target, until there is no doubt you will hit the bullseye. Remember these mental images. When you load the bow with an arrow and pull back the nock to your mouth, you want to see the same picture.



Now let's go get the bow...

Handling the Bow

These are the steps you take in executing a shot:

Stance

Point your bow hand at the target, with your feet spread about shoulders width apart in a balanced ready position.



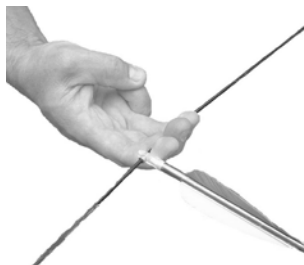
Nock Arrow

If you hold the bow vertically, bring the arrow over the bow to load. Handle the arrow by the nock to load when the bow is hanging at your side. The arrow is snapped on the string under the nock rest with the arrow shaft resting on the bow's shelf. The index fletching (different color than other two) faces up towards you.



Drawing Hand Set

To start, grasp the string using a "scout salute" of three fingers only, just before the first joint of fingers. The thumb and little finger are locked down out of the way. Use either a grip of three fingers under the arrow nock, or a grip of one finger above the arrow nock and two under to pull the string.



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Bow Hand Set

Your hand grips the bow handle along the "life line" to guide placement. The palm is not used, pressure is resisted with the base of your thumb on the handle. As the bow is lifted and pulled, the bow arm will straighten, remember to rotate your elbow out away to avoid the string's path upon release.



Pre-Draw

Imagine a vertical line through the spot you want to hit. All arrows should align with this path. Any adjustments will be for high or low errors, but the arrows will not be sprayed around the target using this technique.



Draw

Start by slowly swinging your arrow point up from the ground into the imagined vertical line on your target. Your bow hand resists and pushes against the bow commencing the draw. As you near the rise, your string hand pulls the string back to your face to anchor. There is a straight horizontal line in your posture from arrow point to the tip of your elbow. Draw is complete as you bring the string to anchor, no further or shorter.

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Anchor

Anchor is your rear sight for aiming. Use the corner of your mouth to start. As you pull the string to your face, touch your index or middle finger to your canine tooth, and hold. This is the foundation for consistent shooting. You must see the same picture down the arrow each time you draw the arrow back.



Alignment

By bringing the arrow to anchor at your mouth, notice the arrow is under your eye. This allows a peripheral view down the arrow's shaft to the target. Again, this is similar to pointing your index finger at the target - you will be replacing your arm with the arrow, and your index finger tip with the arrow point.

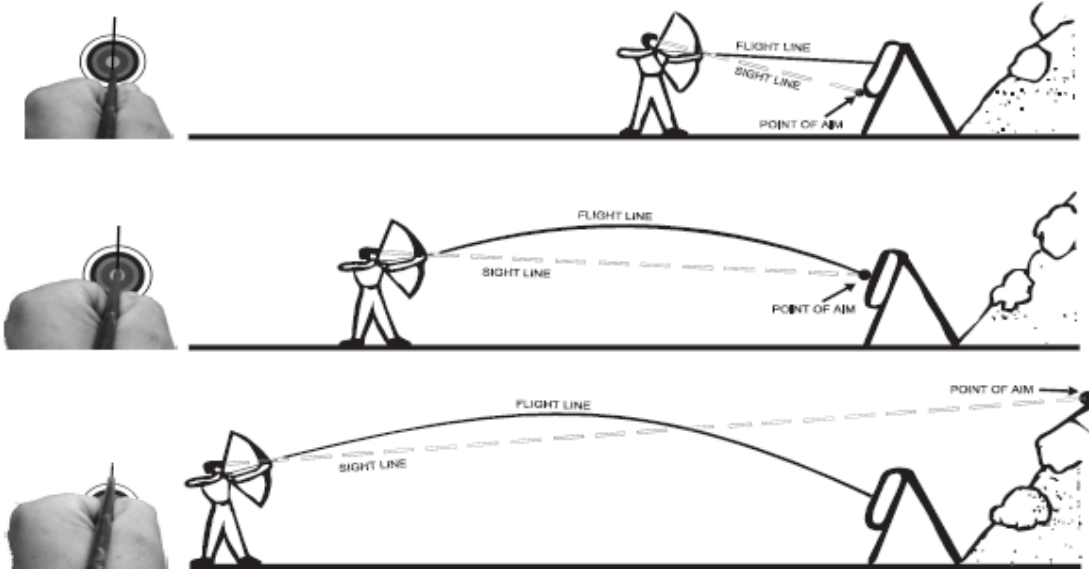


Both eyes remain open at all times, but the dominant eye aims, or focuses at what you want to hit - thereby guiding your alignment of the arrow with the target. It may help to tilt the bow and your head slightly together so that your dominant eye is lowered towards the arrow. Also maintain a head position leaning towards the target, like you are touching your nose to the back fletching. If you lean your head back away from the arrow, you make it more difficult to see down the arrow. Notice the point of the arrow and its reference to the target.

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Aim

At distances of 10 yards or less, the arrow point will be centered underneath your bullseye. This will be your guide for future shot adjustments allowing for the arrow's trajectory. So always start below your intended bullseye, raise the point above the bullseye for longer distances. There will be a distance where the point and bullseye are aligned, this is your "point on" distance.



Shot Set-Up

"Feel" the shot. Envision a successful hit. Focus on the spot you want to hit. Instinctively, it will look right, all is in alignment - that is when you release the string. This "feel" develops through repetitive practice.

Release

"Do nothing", relax the tension in your fingers, let the string smoothly slip out. Your hand is still on your face and bow hand raised as you witness the arrow's flight into the target. Once in the target, relax your position.



Follow Through

Until now, you shot without a thought, only a mental focus on the spot on your target. Now, contemplate the results. Adjust your form for any errors. Your objective is to develop consistency. Anchor and elevation adjustment will correct most errors.

Thanks for your attention. We hope you enjoy the pursuit of Archery, and introduce others to its challenge.

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Cost of Archery Equipment

Most archery equipment used by the beginners will cost around \$200.00. For an intermediate archer that would like to compete in local tournaments the price may range from \$700.00 - \$1500.00.

A considerable second hand market for archery equipment exists with prices typically 50%-75% of the original cost. Some retail archery shops also sell second hand and reconditioned equipment, and occasionally offer good deals on year-end models.

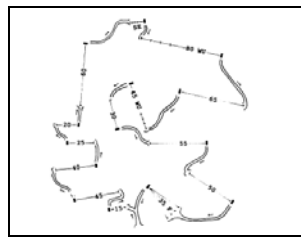
Before buying any archery equipment it is worthwhile to work with an archery instructor or Pro Shop in order to work out all of your archery measurements and specifications.

Archery Games

Target Archery – In target archery you shoot at round multi-colored targets. Shooting at distances varying from 18 meters (indoor) to 90 meters (outdoor), with target sizes being 40 or 60 centimeters for indoors and either 80 or 122 centimeters for outdoors. The targets have five colors with each color being divided into two sections to provide 10 scoring zones. The innermost ring is given a value of 10 points, down to the outermost ring with a value of 1 point. Target rounds involve shooting a set number of arrows from one or several distances.



Field Archery – Field archery is a challenging outdoor discipline in which the archer takes on the terrain as well as the target. It is a course set up in a wooded setting taking advantage of hills, slopes, angles and light and shade. Field archery rounds involves walking a course and stopping to shoot a set number of arrows over varying distances at large foam targets that resemble familiar shapes or other target butts.

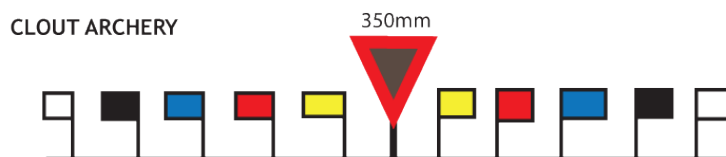


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3-D Archery – 3-D archery is a subset of Field archery. It utilizes life-sized models of game animals and is popular with hunters. It is a course set up in a wooded setting taking advantage of hills, slopes, angles and light and shade. 3-D archery rounds involves walking a course and stopping to shoot a set number of arrows over varying distances at foam animal targets.



Clout Archery – Clout archery is derived from medieval warfare where archers would lob arrows onto the advancing army. In Clout a target measuring 15 meters in diameter is marked on the ground, with a triangular marker placed at its center. The archer's task is to lob arrows closest to the center into this ground-target from distances up to 180 meter distances.

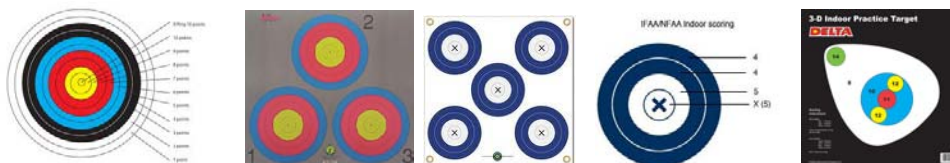


Flight Archery -- In flight archery the aim is to shoot the greatest distance; accuracy or penetrating power are not relevant. Flight archery relies on the finest in performance equipment, optimized for the single purpose of greater range.

Sky Archery -- An event very similar to the sport of biathlon except a recurve bow is used in place of a gun. The athletes ski around a cross-country track and there are two stances in which the athlete must shoot the targets: kneeling and standing. During competition the skis must not be removed at any time. The athlete may unfasten the ski when shooting in the kneeling position but must keep the foot in contact with the ski. The shooting distance is 18 meters and the targets 16 cm in diameter. In certain events, for every missed target, the athlete must ski one penalty loop. The loop is 150 meters long.

Rules for Scoring

Scoring takes place after each “End”. Arrows are scored according to the position in the target face. If the shaft of an arrow touches the dividing line between two scoring rings, that arrow always scores the higher value. The scoring value of a FITA 5-color target face it is from 10 at the center of the face, to 9, 8, 7, 6, 5, 4, 3, 2, & 1 for each ring. For IFAA/NFAA Blue and white target face it is from 5 to 4 points. Outside the 4 point ring is a miss.



Glossary of Terms

Bows:

- Traditional or Long bows - Made by laminating pieces of woods like yew, ash or elm, or, alternatively two pieces of wood with differing characteristics such as elm, yew strengthened with fiberglass. The tips of these bows may be made out of bone or horn.
- Recurve - Typically made in three sections with a handle made from cast or machined aluminum, fitted with flexible limbs on each end made from laminates of carbon, fiberglass, and wood. Space age, non-stretch materials are used for bowstrings.
- Compound - Compound bows are much more technically sophisticated, employing wheels or 'cams' at the tip of the limbs. Acting as lever, these wheels allow an archer to draw and hold a bow with relative ease.

Arrows:

- Point – The tip of the arrow. Shaped like a bullet, it penetrates the target.
- Nock – The attachment on the rear end of an arrow that holds it in place on the bow string (also, to "nock" is to place the arrow on the string).
- Fletching – The feathers (real or synthetic) attached to the arrow which helps stabilize it during flight. The same color pattern must be used throughout an end.
- Shaft – The long, narrow middle of the arrow, connecting the pile to the nock. Any substance (wood, aluminum, carbon) is allowed, but the shaft may not exceed 9.3 mm (about 1/3 of an inch) in diameter. It is marked with the archer's name or initials for identification.

Other Equipment:

- Release aids – Release aids may be used only by compound shooters in the compound 3-D and FITA events. Competence with the equipment must have been demonstrated before the release aid may be used.
- Long rod stabilizer – From 29 to 36 inches long, it balances and stabilizes the bow when raised.
- Side rod stabilizers – From 18 to 12 inches long, these also balance and stabilize the bow when raised.
- Grip – Where you hold the bow.
- Riser – The handle of the bow, and the foundation that supports all other elements. The side facing the target is the back of the bow. The side near the string is the front.
- Limb – The part of the bow from the handle to the tip. A limb can have a draw weight of 15 to 51 pounds.
- Clicker – Helps an archer release at the same spot during the draw process.
- Quiver – A ground quiver, or a quiver worn by the shooter or attached to the bow, must be used to hold arrows.
- Arm guard – used to protect the forearm from getting hit by the string.
- Finger Tab – Protects the tips of the String hand while drawing the bow.

Other Terms:

- ATA/AMO standards – The Archery Trade Association, formerly known as the Archery Manufacturer and Merchant's Organization, (AMO) is a non-profit trade organization for the promotion of archery and bowhunting through sale of equipment, projects in archery education, the standardization of equipment measures, and the sponsorship of events. It includes manufacturers, distributors, retailers, and other companies associated with these industries.
- FITA -- The international governing body of archery is the International Archery Federation (FITA). Founded on the 4th of September, 1931 in Lwow, Poland, by seven countries (France, Czech Republic, Sweden, Poland, the United States, Hungary, and Italy), FITA serves to promote and regulate archery world-wide through its more than 140 Member Associations (National Federations or Associations) and in conformity with the Olympic principles. It aims at framing and interpreting the FITA Rules and arranging for the organization of World Championships and other international competitions.
- ASA -- Since its inception in 1993 the Archery Shooters Association, headquartered in Kennesaw, Georgia, has hosted tens of thousands of amateur and professional archers from across the United States in national ASA Pro/Am and ASA Federation competitions.
- USA Archery – The governing body for Olympic archery in the USA

Archery 101

Common Archery Terms:

- Aim: Any method used to point the arrow in the directions you want it to go.
- Anchor: Consistent placement of the drawing hand to a position on the face, mouth or jaw.
- Arm Guard: A piece of stiff material such as leather used to protect the bow arm of the bowstring upon release. It is worn on the inside of the forearm of the bow arm.
- Arrow rest: The horizontal projection on the bow upon which the arrow lies.
- Back: The side of the bow away from the bowstring.
- Bare bow: A style of shooting – without a bow sight.
- 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 sight: A mechanical device placed on the bow, which the archer uses for aiming at the target.
- Bow square: A “T” shaped device used to measure brace height and for placing nock locaters.
- Bow stringer: A device used to string a bow safely.
- Brace height: The distance between the pivot point to the string when the bow is strung. (Also called the string height and once called the fistmele.)
- Broadhead: A sharp, razor bladed arrow point used for hunting
- 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 at a given distance.
- Center serving: The material in the center of the bowstring where the arrow is nocked. Protects the string from wear.
- Composite bow: A bow made of several materials.
- Compound bow: A hand-held, hand-drawn bow that uses a pair of cables and wheels to store more energy.
- Crest: The colored bands around the shaft of an arrow, which aid in its identification.
- Draw: To pull the bow string back. Also the distance the bowstring is pulled back.
- Draw weight: The weight, measured in pounds, used to bring the bow to full draw. Also the weight on a bow, using 28 inches to front of bow as the standard draw length.
- End: A set number of arrows that are shot before going to the target to score and retrieve them.
- 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.
- Fletching/Fletch: The feathers, plastic vanes or other devices attached to the arrow shaft, which stabilize the flight of an 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.
- Group: To shoot arrows in a pattern, or the pattern of the arrows in the target.
- 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.
- 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.
- 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: The mark or device that indicates where the arrow is to be placed on the string.
- Recurve bow: A bow with limbs that bend away from the archer when the bow is held in the shooting position

Archery 101

- Serving: The wrapping of material around the loops and center of the bowstring to protect it from wear.
- Spine: The stiffness or amount an arrow bends, determined by hanging a 2# weight from the center of the arrow and measuring the bend.
- Stabilizer: A rod attached to the handle riser. Usually has a weight on the end of the rod. Absorbs the vibration of the bow when the string is released.
- Toxophilite: A lover of the bow: an archer.
- 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.

Web Sites:

www.texasarchery.org – Texas State Archery Association

www.texasarcheryacademy.org – School of Archery

www.texasfieldarchery.org – Texas Field Archery Association

www.usarchery.org – USA Governing body for Olympic Archery

www.nfaa-archery.org - National Field Archery Association

www.asaarchery.com – Archery Shooters Association

www.archery.org – World Archery

www.ibo.net – International Bowhunting Organization

www.lancasterarchery.com Largest archery supplier in USA