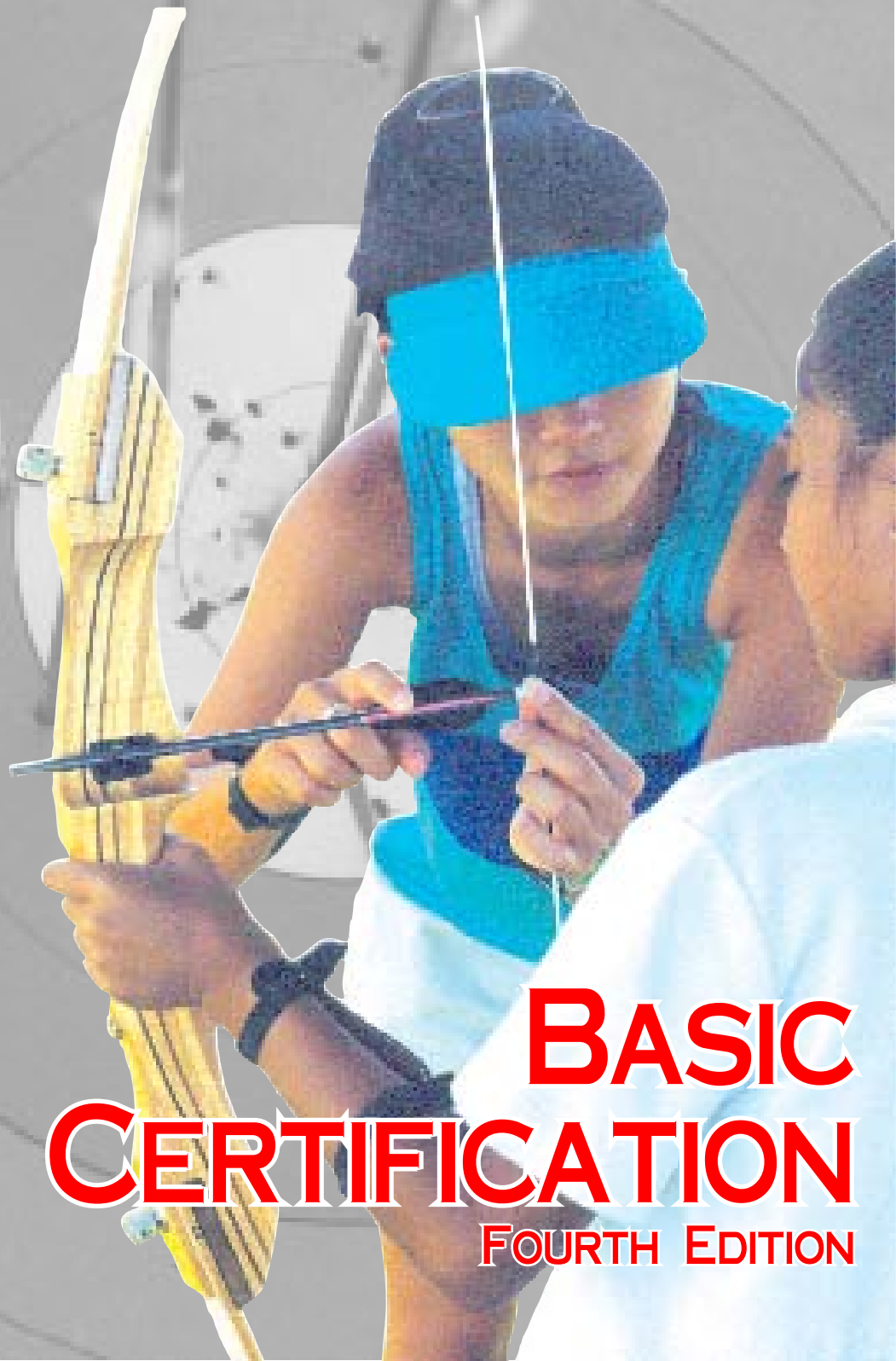


# ARCHERY INSTRUCTOR TRAINING

the Official Certification Course of  
USA Archery &  
National Field Archery Association



**BASIC  
CERTIFICATION**  
FOURTH EDITION

# BASIC CERTIFICATION

Archery is a unique sport that can be enjoyed by virtually anyone regardless of age, gender, size, physical ability or previous experience. On the very first day of class, your participants can be taught how to shoot and hit the target, which gives them a tremendous feeling of success and pride.

Using archery to teach sports success is a valuable lesson which transfers into other recreational activities. It appeals to participants who might otherwise not get involved in any sports.

Archery instills confidence, greater attention spans, and a willingness to try other sports activities.

Archery classes are easy to conduct and administer. Safe archery ranges can fit into almost any indoor or outdoor space, and equipment is readily available and inexpensive compared to other sports.

## Course Objective

This course will teach you to be a safe and effective basic instructor—how to run a safe program, how to select and maintain proper program equipment, and how to teach beginning archers in a short-term recreational setting.

Enjoy offering archery in your adult or youth recreation program. Your participants will love it, and it will keep them coming back for more!

## Archery Instructor Training

USA Archery and NFAA both recognize this universal Instructor Certification under a joint Basic and Intermediate Instructor training agreement.

Successful Basic Certification participants are encouraged to learn more about both organizations by visiting their websites.



[www.usarchery.org](http://www.usarchery.org)



[www.fieldarchery.org](http://www.fieldarchery.org)

## Basic Instructor Course

The Universal Basic Archery Instructor course is designed for camp and youth counselors, and other short-term recreational programs. When you complete this course, you will have learned how to teach the all-important first lessons of a beginner's archery career.

There are three main sections of the course.

**First Section:** You will learn all of the archery range safety rules and procedures by participating in an archery class and learning how to shoot.

**Second Section:** You will learn how to teach archery to beginners and how to help them develop good shooting skills.

**Third Section:** You will learn how to run an archery program, including equipment repair, class planning, and games.



## Course Requirements

- You must attend all 8 hours\* of the course.
- You must pass the written test with a score of 75% or better.
- You must pass the practical portions of the course – coach and pupil exercises and safety class instructions.

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\*For up to 12 participants. More than 12 participants require 12 hours of course time.

Written by Lloyd Brown, 2-Time U.S. Olympic Archery Team Coach, and other coaches of the USA Archery team. Copyright©2006 USA Archery except where indicated, published by USA Archery. Thanks go to coaches Jerry Wenzel and Larry Wise for their editing skills.

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USA Archery and NFAA have designated USA Archery as their sole official publisher and distributor for Basic and Intermediate Archery Instructor Certification manuals. Funds from the sale of this publication directly support the training of new certified instructors, whose resulting Certification is recognized by both organizations.

Other organizations may use the materials only with the written permission of USA Archery and NFAA.

## CHAPTER ONE *The World of Archery*

Archery is an international sport with many types of equipment and many different styles of competition.

### Target Archery

Target Archery is shot at a 5-color, 10-ring target face at fixed distances. Archers stand on the shooting line together, on a level field shooting in the same direction at a row of targets. Target Archery Rounds are shot both indoors and outdoors, at different marked distances and varying sizes of target faces. Target archery is shot in the Olympic Games.



### The Olympic Games

Archery is an Olympic Sport with more than 140 countries participating in Olympic Style Archery. The Olympic Round consists of exciting Match Play elimination rounds for both men's and women's classes. A fast paced Team round is also shot, in both the men's and women's classes. All Olympic round competitions are shot at a 122 cm. target face at 70 meters.

The International Archery Federation, FITA, also holds World Championships and a World Cup series during non-Olympic Years. There are opportunities for juniors under the age of 18 and Collegiate archers to compete at FITA World Championships.

### Field Archery

Field Archery is shot on a challenging course, with targets placed at different distances, up hill, down hill, or on the side of a mountain. The archers walk the course from target to target, often in the woods. Most Field courses have targets at marked distances. However, some field rounds are also shot at unmarked distances, requiring increased skills of the competitors. Several organizations offer field rounds, and other types of rounds that may include a hunter round or an animal round. The types and sizes of target faces differ, as well as the scoring.

### 3-D Archery

3-D Archery is shot on a course like Field Archery, however the targets are made of foam that is molded and painted to resemble game animals. 3-D Archery is extremely popular throughout the United States. Most courses are unmarked to closely resemble bowhunting.



# Archery Activity

## Organizations

**USA Archery** is the official organization for Olympic Archery and is the U.S.A. member organization of FITA. USA Archery provides training and development programs to produce Olympic and World Champions.

Young archers can set goals to become a resident athlete at the Olympic Training Center, represent the USA at International Competitions, or make US Archery Teams. The Junior Olympic Archery Development Program and the College Division are governed by USA Archery and hold their own local, state, regional and National Championships each year. USA Archery also facilitates instructor training courses.

[www.USArchery.org](http://www.USArchery.org)

**National Field Archery Association** incorporates numerous styles of archery, with many equipment divisions, rounds, and age groups. The NFAA hosts indoor archery tournaments and sanctions numerous Field & 3-D Rounds each year. Popular league programs and mail matches are also sanctioned by the NFAA.

The NFAA is a member of the International Field Archery Association. Members compete in regional and international competition such as the North American Field Archery Championships and the World Field Archery Championships sanctioned by the IFAA.

[www.FieldArchery.org](http://www.FieldArchery.org).

**International Bowhunting Organization (IBO)** and the **Archery Shooters Association (ASA)** are the primary organizations for 3-D Archery in the United States. They each host numerous 3-D tournaments, some with large Professional Divisions.

[www.IBO.net](http://www.IBO.net) and [www.ASAarchery.com](http://www.ASAarchery.com)

**National Archery in the Schools Program** provides in-school physical education programs.

[www.ArcheryintheSchools.org](http://www.ArcheryintheSchools.org)

**Archery Trade Association** is the industry trade organization, and posts locations of proshops, clubs and instructors on one of their websites.

[www.AcherySearch.com](http://www.AcherySearch.com)



## CHAPTER TWO Archery Safety

### Outdoor Target Ranges

Outdoor ranges should be located with safety as the main priority. A hillside backstop is ideal. On flat fields, the safety area behind the targets should be a minimum of 50 yards. Safety areas to each side of the range should be no less than 15 yards. These areas should be roped off unless the archery range is in a protected area. Access to the range should be controlled so that spectators and nonparticipants may not walk onto the range

Whenever possible, set up the range so the archers shoot towards the north. This prevents archers from looking into the sun while shooting. Clear away brush behind targets as much as possible. Mow and rake tall grass and remove rocks and other obstructions. This will help avoid lost and broken arrows. Clear the entire archery activity area of any hazards that may trip archers carrying arrows.

This includes holes, roots, branches, stakes, etc.

A range should have a shooting line, waiting line, and a target line. These can be made with paint, rope, tape or chalk. To prevent tripping, DO NOT secure the ends of rope or tape. The shooting line should be at a distance close enough for the kids to hit the target every time. This will vary with the age and ability of the archers, and the size of the target butts.

The waiting line should be 3 yards behind the shooting line. This line allows the range director to have a clear view of the archers who are shooting, and a clear line so the whistle can be blown only after they finish shooting.

The target line should be 5 feet in front of the targets. This line acts as a 'speed bump', slowing the kids down so they won't run into the arrows sticking out of the target. It also keeps the kids that are waiting for their turn to pull arrows a safe distance in front of the targets.



### Archery's High Safety Record

*Archery is one of the safest sports, with a reported injury rate of less than one incident per 1,000 participants in 2004. Other activities like golf and fishing have an injury rate of up to 1.5 to 2 times the rate for archery. Sports like soccer, baseball and basketball have injury rates 15 to 25 times higher than archery*

*The safe record of archery is also recognized by the insurance industry. The standard general liability coverage maintained by most organizations has been determined sufficient for archery. In these situations, no additional policy amendments are needed when adding an archery program.*

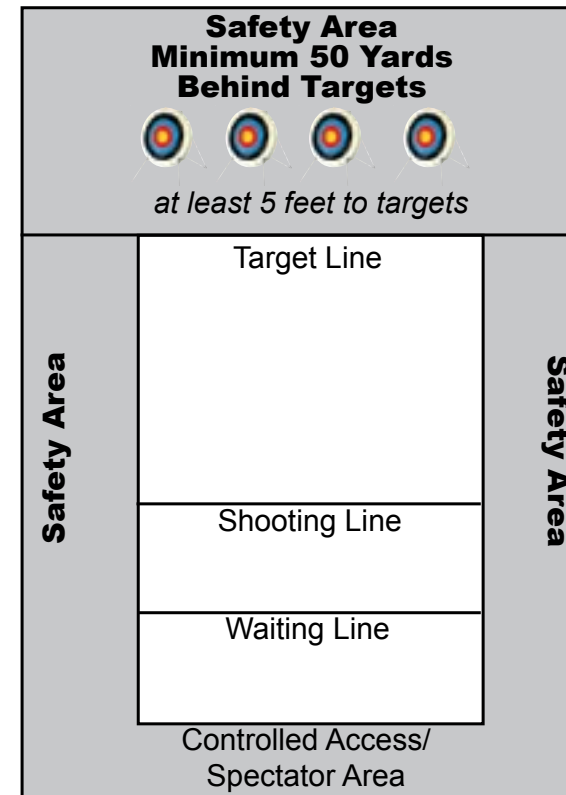
*Always check first with your insurance provider to make sure that your program is covered. Supplemental club insurance is available through most major archery organizations.*

*For more information, see Arrow Sport's Insights V2 05, at:*

*<http://archerysearch.com/publications/ArcherySafetyInsight.pdf>*

*Archery maintains its high safety level through the proper training and certification of archery instructors. When the proper procedures are followed, archery is a very safe activity.*

### Outdoor Archery Range Layout



### Indoor Archery Ranges

An indoor range should also have a Shooting Line, Waiting Line, and a Target Line just like an outdoor range. The surrounding walls can serve as safety barriers. Being indoors, the range needs to have special attention towards safety and protection against accidental damage caused by errant arrows.

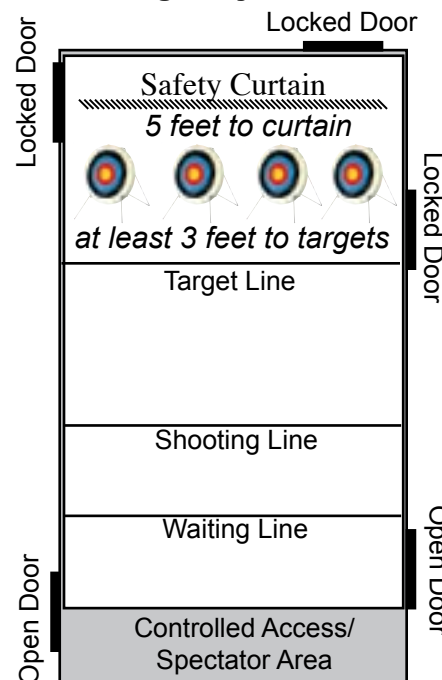
Safety curtains should be hung slightly away from walls to catch arrows and help protect property. Curtains should never be relied upon, however, to protect personal safety or expensive items or windows. Never allow anyone to pass behind a safety curtain while shooting is in progress. Always check behind the curtain before returning to the shooting line to start shooting again.

Lock all doors that are in the line of fire with the archers or that are in the general shooting area. Post warning signs on the outside of the doors alerting everyone that archery is being practiced inside.

Depending upon the type of target matt used and type of floor surface (basketball court), the floor may need to be protected from the equipment.

Lay down easy to remove tape to highlight shooting lanes. To protect the floor, don't lay any equipment on it. Use bow racks, side quivers (or self standing ground quiver). Take care to move or protect any furniture or equipment located downrange.

### Indoor Archery Range Layout

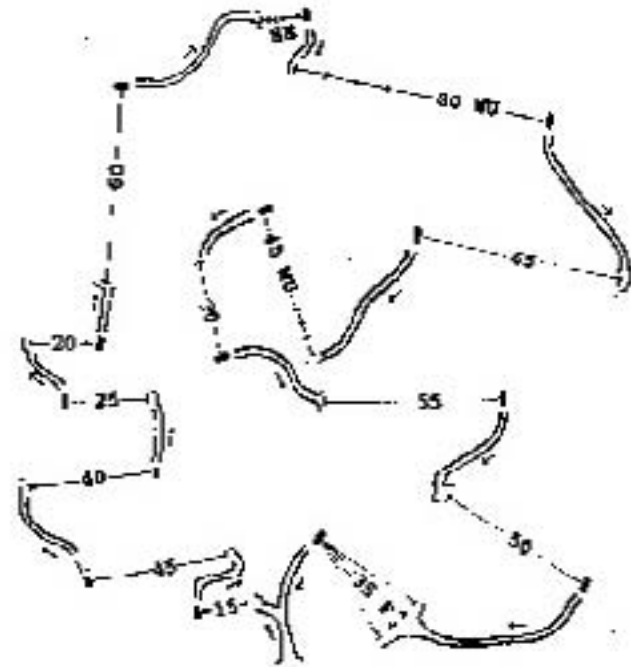


## Field Archery Range Layout

Field archery is played on a roving wooded course, where the targets are set up at different distances and the archers follow footpaths from one shooting point to another.

There are no stock blueprints for a Field Archery range. Each range is different depending on terrain and available land. The sketch to the right depicts a typical 14-target Field Archery Range on nine acres. Shooting lanes are set up with safety being the main concern. Lanes should be a minimum of 5 meters wide, with safety lanes on either side of the shooting lanes being 10 meters wide. Controlled access to the course is very important to insure that passersby do not wander in unexpectedly and cause a hazard.

A flat map alone may not verify the layout of the land on which it is set. A topographical map or physical inspection may be necessary. The map illustration to the right depicts the shooting direction to the targets. In some cases, the range may be safe because of hills and gullies, not readily seen on a flat map.



### Proper Supervision

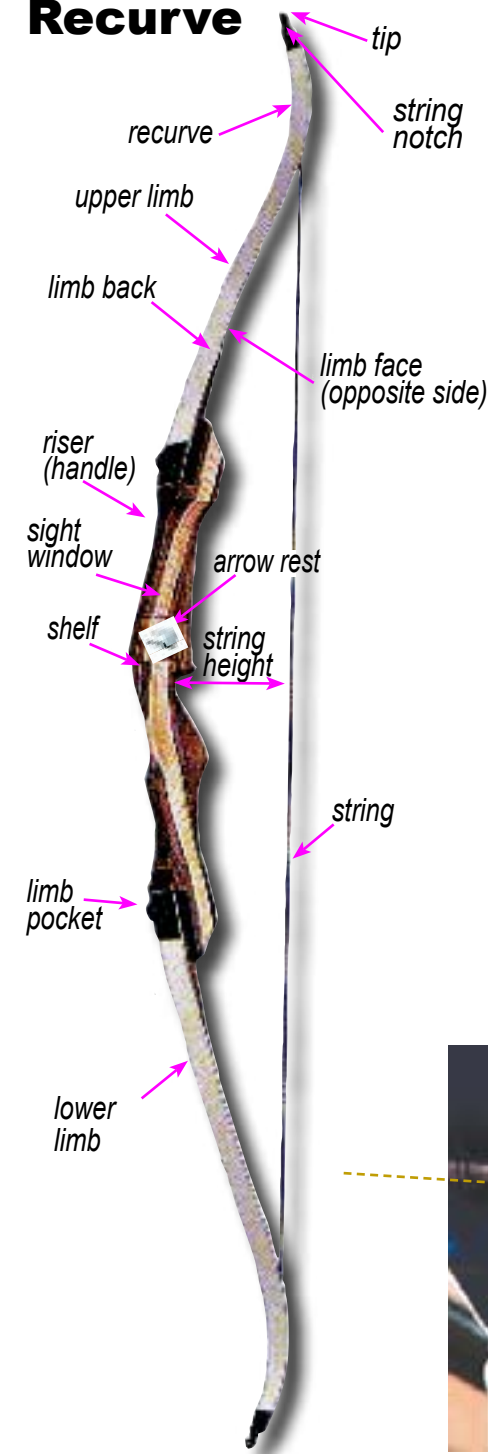
Whenever archery equipment is being used, the instructor must be immediately accessible and able to oversee the entire program. The instructor must be alert to conditions which may be dangerous to participants and take preventative action. Qualified supervision is required while the participants are retrieving arrows as well as while shooting. The number of participants an instructor can manage depends on the experience of the instructor, the age and maturity of the participants, and the abilities or disabilities of the participants. When teaching developmentally disabled children, you may need one instructor for each student.

#### Number & Age of Students per Instructor

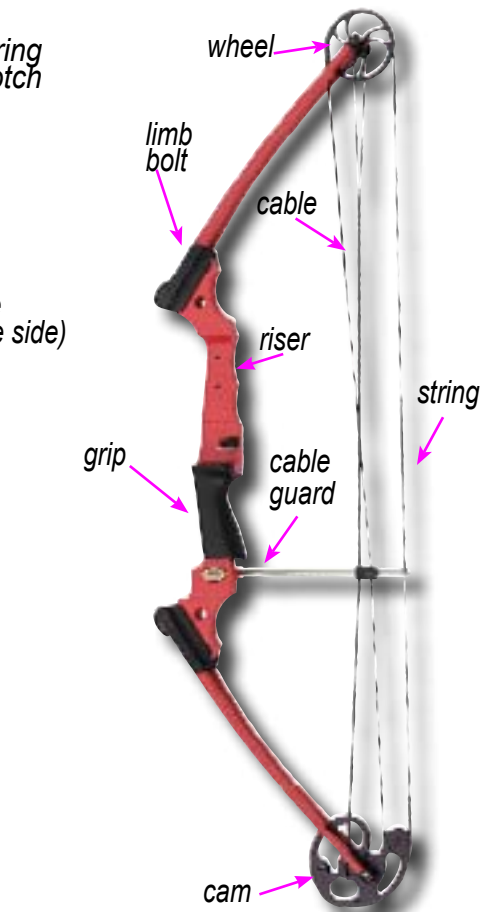
- 6-7 years old - 2 or 3 students per instructor
- 8-9 years old - 4 to 8 students per instructor
- 10-11 years old - 8 to 12 students per instructor
- 12-15 years old - up to 12 students per instructor
- 15 years and older - 12 to 20 students per instructor

## COMMON ARCHERY EQUIPMENT PARTS

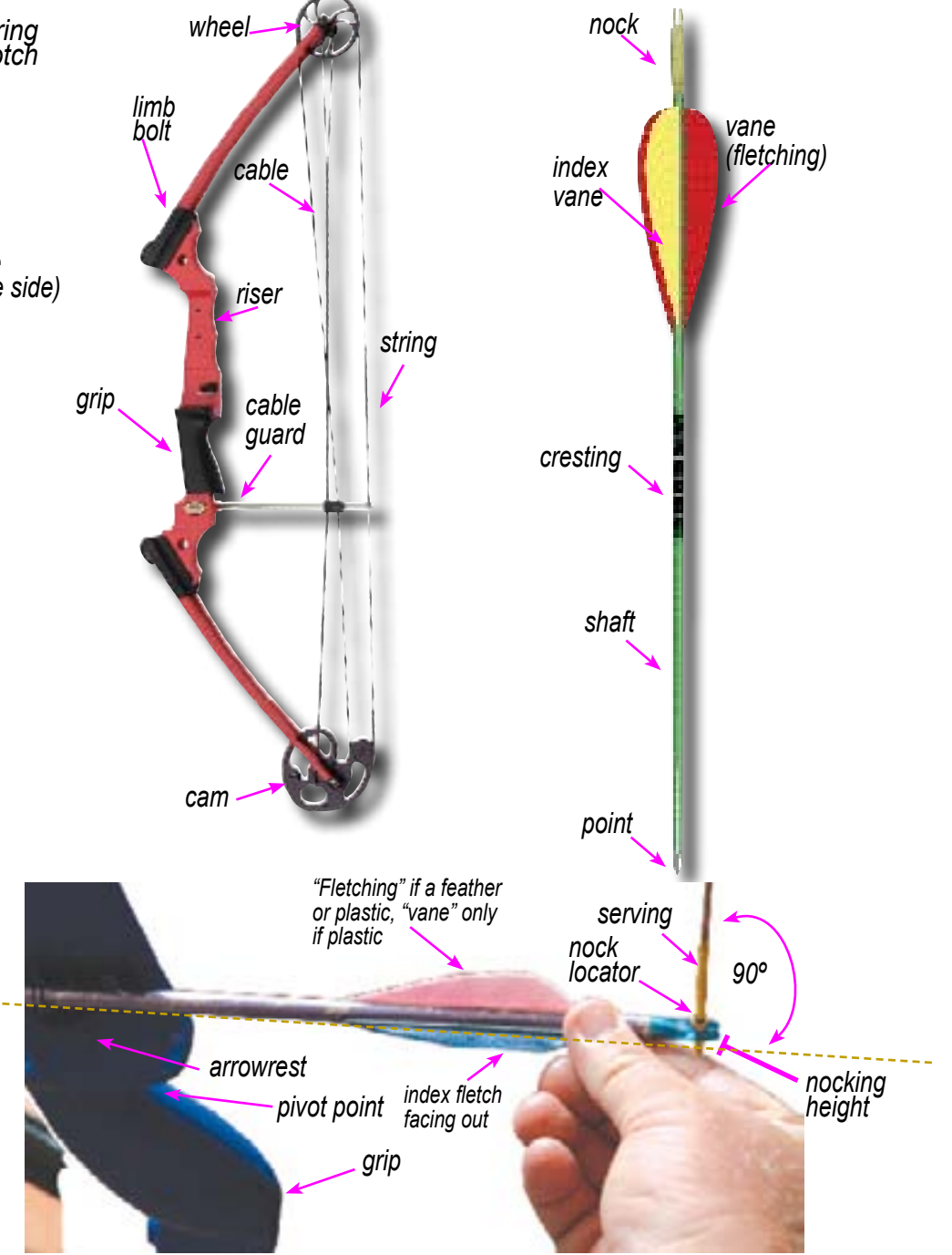
### Recurve



### Compound



### Arrow



## Safely STRINGING A RECURVE BOW

When stringing a bow, follow the bow-stringer manufacturer's instructions, and always be sure the string loops are firmly in place in the notches before releasing pressure. Put the string on the bow with the big loop on the top limb and the smaller loop in the string notch on the lower limb. The string should be on the face side of the bow, in the same direction that it is strung.

### Step-Through Method

This method should only be used on straight, all-fiberglass bows. Laminated recurve bows should only be strung using the step-through method when a stringer is not available. Laminated bow limbs can twist unexpectedly resulting in personal injury or bow damage.



Hold the string in your left hand near the center serving, and the bow in your right hand, at the sight window. Pull the string out far enough to step your right leg through the bow between the string and the grip. Hook the lower limb around your left ankle and put the bow behind you with the grip on your butt. With your right hand, pull the tip of the bow forward while sliding the string loop up the limb and into the top string notch with your left hand. Step out of the bow and check to make sure the string loops are securely in the string notches. Hold the bow with the limbs facing away from you so if it comes unstrung you will not be hit by the limb tip.

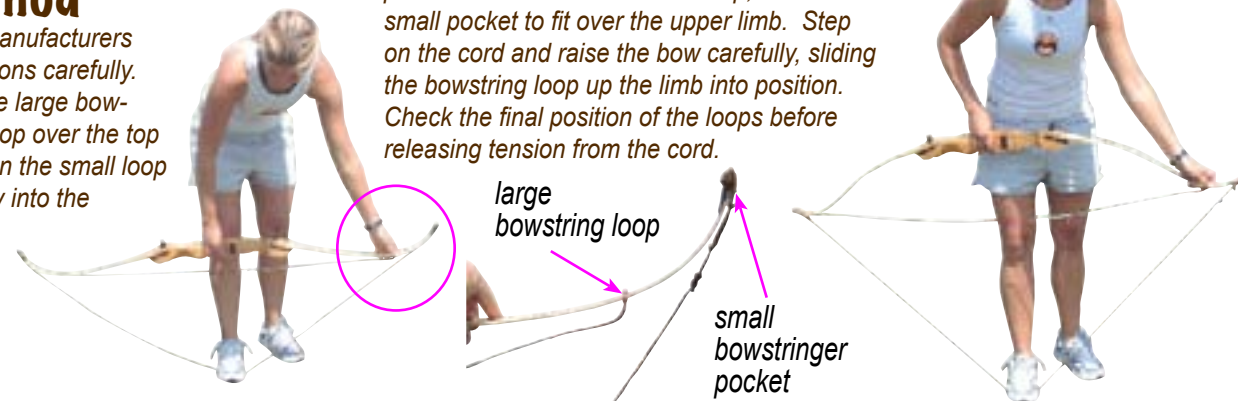
### Push-Pull Method--NEVER USE!

This method involves bracing the bottom tip of the recurve bow against your foot, and pulling the top of the bow down in order to slide the bowstring into position. This method should NEVER be used. There is a high risk of limb slippage which could result in grave personal injury.

### Cord Bowstringer Method

Read manufacturers instructions carefully. Slide the large bowstring loop over the top limb then the small loop securely into the

notches on the lower bow limb. The larger loop should slide freely along the upper limb as shown. The cord stringer will have a large pocket to fit over the lower bow tip, and a small pocket to fit over the upper limb. Step on the cord and raise the bow carefully, sliding the bowstring loop up the limb into position. Check the final position of the loops before releasing tension from the cord.



### Group Control

Prior to shooting, make sure that everyone is behind the Waiting Line.

### Blow the whistle two times to move the archers to the Shooting Line.

Check that everyone is straddling the shooting line and all arrows are in their quivers. Tell them to leave any arrows they drop on the ground, keep their arrows pointed down or towards the target, and only shoot at the target in front of them. As the instructor, you may pick up an arrow that is dropped when you feel it is safe to do so, and only if it is in reach without going in front of the shooting line.

Explain that five or more whistles sounded in a series of blasts is the signal to stop shooting immediately, even if they are at full draw. They should let down, and put their arrows back in their quiver until they are instructed to resume shooting.

### Blow the whistle one time to signal they can commence shooting their arrows.

When the students are done shooting, they should step off the line, and return behind the Waiting Line, placing their bows on the bow rack. By keeping the archers that have finished shooting behind the waiting line, it gives you a clear view of the shooting line and archers that are still shooting their arrows. The distance also keeps the kids that have finished shooting from bothering those with arrows to shoot.



All archers begin behind the WAITING LINE



"Two whistle blasts" Archers to pick up bows and advance to SHOOTING LINE. (bows might also be kept behind the Waiting Line)



Archers straddle the SHOOTING LINE, rest bow tips on their toe and await the signal to draw arrows and shoot.

## Getting Started CHAPTER THREE

Make sure that all of the bows are on the bow racks and that everyone is again behind the waiting line.

**Blow the whistle three times to signal the archers to retrieve arrows.**

Enforce walking by yelling "**WALK**" when you blow the whistle three times for the archers to pull their arrows. Remind them to stop at the target line, and only one or two archers may go forward at once, standing to the side of the target and pulling their arrows.

Make sure that no one is behind the archers when they are pulling their arrows from the target. It is important to closely supervise the archers pulling their arrows from the target.

The instructor should be the last one to come back from the targets. Check behind the targets and the arrow curtain to make sure there are no kids left behind looking for arrows. As an extra precaution, know how many students are in your class, and make sure they are all back at the waiting line.

*"One whistle blast"  
Archers begin shooting.  
After their arrows are shot, they return to the WAITING LINE.*



*"Three whistle blasts"  
Archers walk to the TARGET LINE to score their arrows.*



*Maximum 2 archers per target advance to the side of target to pull arrows. Archers walk back to behind the WAITING LINE.*



The Safety Orientation class can serve as a stand alone single class for introducing newcomers to the sport of archery, or can act as the first class in a series. In this class, all of the archery range safety rules and procedures are covered, along with an introduction to proper shooting technique.

The students will learn first by explanation, followed by drills, a demonstration and then practice. There is a lot to get done, and the instructor needs to be prepared to keep the class moving and establish control of the group.

There are two primary goals of the first meeting. The first goal is **Safety**. The participants must learn and obey all of the archery range rules and procedures. You must teach them all the rules and make sure you enforce the rules throughout the class.

The second goal is for students to learn certain **foundation skills** that will enable them to become proficient archers if they are willing to put in the time and effort. Many will not want to work on the skills to become a better archer. They would rather just have fun shooting at targets. There are those that would like to become better archers, and it is important the instructor give them the tools to develop good foundation skills and good habits early in their shooting career. Stretch out the time spent on shooting drills as long as you can without losing their attention and keeping them from enjoying the sport. The first class may shoot very few or even no arrows. If this is a one-time activity, keep the drills short and make sure they have some fun shooting. We'll want them to come back later to learn and enjoy the sport for a lifetime.

Keep students focused on their shooting technique, rather than hitting the target. Start the class up close so no one misses the target. Keep target faces off the target mats for as long as possible. Blank bale practice will keep the archers more focused on proper shooting technique. Eventually they will want to see the results of their efforts and will expect to shoot targets. Continue to emphasize the focus on shooting form rather than aiming or hitting the target.

As the class participants arrive, have them fill out any paperwork, or check their names off a roll sheet. Try to start the class as close to on time as possible. Any late participants will have to catch up later in the class.

Now you are ready to start your class. The following pages depict a typical Safety Orientation class and an introductory class for your new archers.

Time Line	
Introduction	1 minute
Rules and Procedure	5 minutes
Hand Out Equipment	5-10 minutes
Anatomy of Equipment	5 minutes
Alignment and Execution Drills	5-10 minutes
Demonstration	5 minutes
First Shot	5 minutes
Pulling Arrows	5 minutes
Practice	5-25 minutes
Put Equipment Away	5 minutes
<b>TOTAL CLASS</b>	<b>45 – 60+ minutes</b>

## Welcome

After you have everyone together, begin by welcoming them to the class and introduce yourself. Take care of any announcements regarding the course, restroom locations, parking, or anything else that needs to be covered.

## Hand Out Equipment

Before handing out equipment, check each student for loose clothing, hats or jewelry that may get in the way or caught in the string while shooting. Advise the students of this problem and suggest that they wear tight fitting tops and thermal undershirts in cold weather, rather than loose fitting shirts, sweat shirts or jackets. Remove anything from shirt pockets, tie back long hair and remove large ear rings that may get tugged out during the release.

Pass out the arm guards. Demonstrate how to put one on. For right handed archers, the arm guard should go on the left arm. The large part goes near the elbow, and the smaller part towards the wrist. Adjust the straps to fit their arm. Explain that the arm guard is to protect the arm from the string and that they should always wear it while shooting.

Have the archers line up and hold out their shooting hands for their finger tabs. Size up each archer and place the finger tab on their finger for them. It can be difficult for new archers to get their tabs on right the first time.

Armguard is positioned to protect the forearm of the bowhand



Fingertab covers three fingers of the drawing hand



## Quivers

When not being shot, arrows are stored in a quiver—either hung from the waist or hip or standing upright on the ground.

Archers are first given their side quivers and shown how to hang them from a belt loop or waistband. Arrows are then distributed—matching the arrow length to the archer (see next page). Hip quivers are most practical if you have enough equipment for each archer without sharing.

Ground quivers can be made from a plastic pipe fixed upright to a broad base, traffic cones with the top portion removed (leaving a hole to insert arrows), or any other design that gives easy access and stability to the arrows.

Ground quivers are generally used with programs that require archers to share equipment.

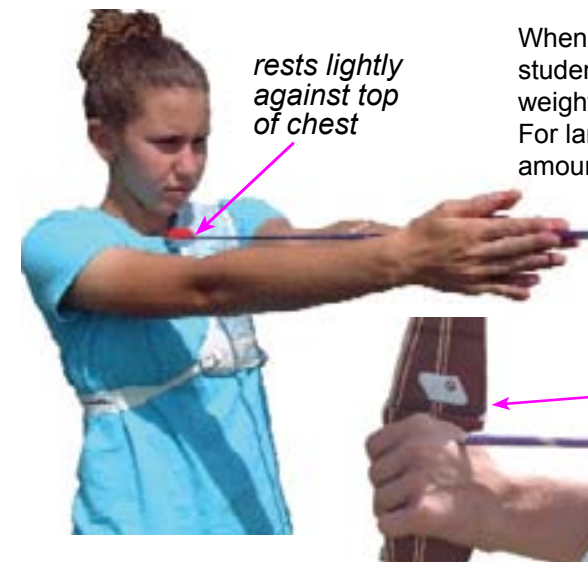


## Safe Equipment Handling

Explain that you will now hand out the arrows. Participants should be instructed to keep their arrows in their quivers until they are told they can shoot.

Measure each archer for the correct arrow length. Have them hold their hands straight out in front of them with the palms together. Make sure that the point of the arrow is at least one inch past their finger tips, with the nock touching the chest. Tell the archers to remember which arrows you gave them. They can be identified by the different colors. Each archer should have 3 arrows for the first few classes.

In some programs, all of the arrows are the same length, long enough for almost every archer. In this case, you can put the arrows in ground quivers at the shooting stations or have the students pick up their quivers. Watch out for tall students with long arms that may overdraw an arrow that is too short for them.



Hand out the bows. The archers will need to tell you if they are shooting left handed or right handed so you can give them the correct bow. Tell the archers to hold on to the bows by the grips, and if they want to set them down, to set them on their toes. This keeps the bottom limb tip from wearing and dirt from getting in the string and string notch (or “cam groove” on compound bow). Explain that if the bow is pulled back and let go without an arrow, it could break and possibly cause injury to them or someone near them.

Tell the archers to remember which bow they have (use bow numbers or names), and to only use the bow assigned to them. You can size up each archer as you pass out the equipment. Recurve bows should be about the same height as the archer. If you have more than one draw weight bow, try to give the heavier draw weight bows to the stronger looking archers.

Take the archers to the Waiting Line and have them put their bows on the bow racks (if provided) or other holding area.

When sharing bows, you can pair up students who use the same length, weight and right or left hand bow. For large groups with a limited amount of equipment, keep the bows on a rack between the waiting and shooting lines, or at the shooting line on a bow stand with the arrows.

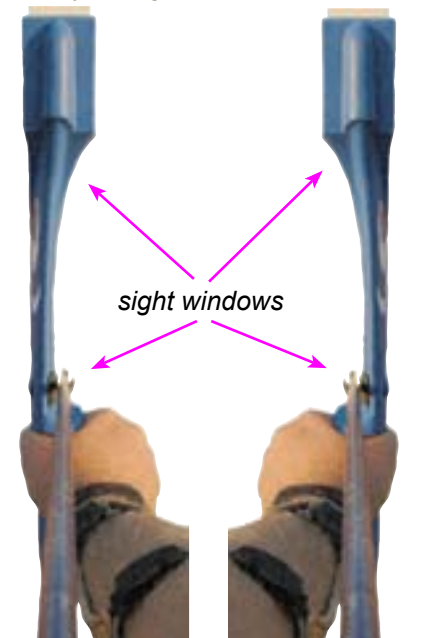
## Is it Right Hand or Left Hand?

Bows are made either “right-” or “left-handed.” But how to tell them apart?

The “sight window” is positioned on the same side of the bow as the hand that should be holding it. That’s the side from which the arrow shoots.

If a bow is right-handed, the string should be drawn back with the right hand. If it’s left-handed, the left hand is used to draw the string.

If program bows are provided, a rule of thumb is to provide one left-hand bow for every five right-hand bows.



left hand bow right hand bow

Check Page 19 to learn how to check for eye dominance.



## Pre-Shooting Drills

Tell the archers you will take them through a few drills without their bows prior to shooting to help them develop better shooting technique. At the same time, you can explain the range commands and safety rules

Ask the students to wait behind the shooting line. Explain that 2 whistle blasts is the signal for them to come to the shooting line. This time they will do it without their bows.

With the archers standing on the shooting line without their bows and in the proper stance, repeat the Shoulder Shrug Drill at least 5 times.

## 1-2-3 Alignment Drill (Without a Bow)

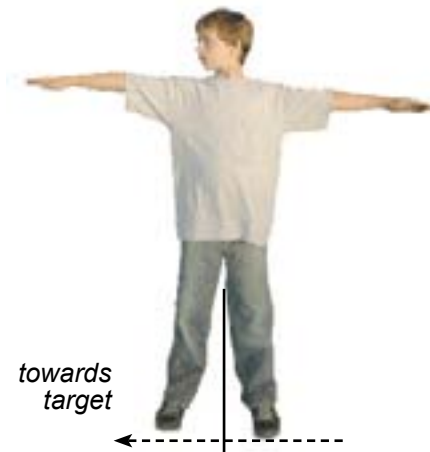
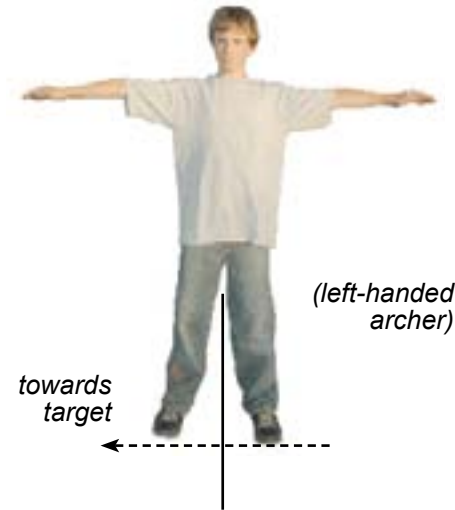
The 1-2-3 Alignment Drill helps you get the feel of being in the proper shooting position at full draw.

**Technique**  
Maintain stance and posture throughout this drill. Stand up straight, with arms relaxed at your sides, palms towards your legs, and head facing straight forward.

1 - While keeping the feeling of pushing fingertips towards the ground, raise arms straight up to form a T, palms facing down. Shoulders, ribs and chest should stay down.

2 - Turn your head towards the target, keeping it straight up and over the center of the body.

3 - Bring drawing hand to the face by bending the elbow while maintaining alignment. This is the feeling one should have at full draw. The chest is perpendicular to the target, the shoulders and chest are down, and the body is in a "T" position.



## Shoulder Shrug Drill

This drill teaches how to set the shoulders down.

Raise shoulders up towards ears, then push fingertips down towards the ground.

Repeat at least 5 times, then begin the 1-2-3 Alignment Drill, and repeat 5 times.



## 1-2-3 Release Motion Drill (Without Bow)

The 1-2-3 Release Drill will help you learn the proper motion and direction of the release and a proper follow-through technique.

From the "1-2-3 Alignment Drill", go through the release motion on the count of three.

From the full draw position, count "1-2-3". On "3", move your release hand along the side of your face to your ear, simulating the motion of the release and follow through.

The fingers of your drawing hand should remain relaxed, and your hand should remain in contact with your face and neck. Follow the jaw line throughout the motion, finishing with the fingers touching your neck, just below your ear.

First learn this drill without any aids, then learn the same motion using a stretch band or a string loop.

Practice while looking in a mirror to make sure your hand follows the motion as shown in the pictures. Practice this drill as often as you can at home.

Now the archers can return to behind the Waiting Line.



## Shooting Demonstration by Instructor

While the archers remain behind the waiting line, the instructor will demonstrate a shot from the shooting line. Make sure everyone can see you, and that they are paying attention to the demonstration. If you are right handed, stand towards the left side of the range, so everyone can see the front of you during the demonstration. Remind them to keep their arrows in their quivers during the demonstration.

Talk through the shot sequence, keeping it short and simple.

First remind the archers of the stance.

Explain how to take the arrow out of the quiver, holding the arrow close to the nock. Nock the arrow on the string tightly under the nock locator. Make sure that the index feather is pointing towards the archer, away from the bow.

Ask the archers to hold out their bow hands and make a Y with their fingers and thumb. This is the position that the hand should be in on the bow grip. Place the hand on the grip with the knuckles at a 45-degree angle and the thumb pointed towards the target.

Set the string in the first groove of the first three fingers of the string hand. Start with all three fingers under the arrow.

Raise the bow arm and string hand together, keeping the shoulders down and relaxed as in the 1-2-3 Alignment Drill. Raise the arrow until it is parallel to the ground and the drawing arm is near the level of the nose and aligning your chest sideways to the target. They should feel as if they are pointing their bow shoulder towards the target.

Draw the bow back by rotating the drawing arm elbow back behind the arrow.

Put the drawing hand against your face.

Release the arrow by letting the string go through your fingers while you continue the drawing motion back along your face and neck so your hand finishes under your ear. Keep your bow arm up through the follow through.

At this time, explain the whistle system that is used to control the shooting. Two blasts will be the signal to come to the shooting line. Remind the students to keep their arrows in their quivers until the instructor blows the whistle one time for the archers to begin shooting.



Explain that you will watch them all shoot their first arrow, and to wait until you tell them to shoot. This is to make sure they are not going to hurt themselves or anyone standing around them.

After they are done shooting, they should step off the shooting line and put their bows back on the rack or stand. They should wait behind the Waiting Line until the instructor blows the whistle 3 times, indicating it is OK to go forward and pull their arrows from the target.

There are only a few rules that you need to tell the group at this time.

If an arrow is dropped, leave it on the ground until an instructor picks it up, or until after the 3 whistles are blown to retrieve the arrow.

Always keep your arrows pointed down or towards the target, and only shoot at the target in front of you.

If the instructor blows the whistle 5 or more times in a series of blasts (demonstrate), that means there is an emergency on the range, and the archers should let their bows down and put their arrows back in their quivers immediately.

Examples of dangers might be a person or animal that has wandered on to the range, or someone going forward to get arrows before the signal is given.

## Eye Dominance

*There is great debate in the shooting sports about the importance of eye dominance. There is evidence that shooting scores are at their highest when the shooter is shooting in line with the dominant eye.*

*Usually, a shooter's dominant eye would be on the same side of the body as the dominant hand and be the eye that's used for aiming. For example, a right-handed person would normally have a right-dominant eye and shoot a right-handed bow. This is not always the case, and there are a number of people who are "cross dominant," meaning that while they may favor their right hand, for example, they also favor their left eye. If they shoot a right-handed bow, they still try to aim with their left eye.*

*As an instructor, what are you to do? A traditional method of checking this is to perform an eye check on new archers to make sure they are using the bow that corresponds with their stronger eye. This is not always practical, since people are prone to switch their dominant eye, or retrain the weaker eye to become the dominant eye. For a beginning archery program, it is recommended that you simply ask the archers if they are right or left handed, and have them shoot the bow that matches.*

*If an archer demonstrates severe eye cross dominance (by repeatedly missing the target to one side or the other, or by crooking the neck to aim, take a quick eye check, and switch the bow if necessary. Have them hold their arms outstretched and look at you as shown. The dominant eye will appear in the space between their palms.*



## First Shot by Archer

Now you are ready for the class to shoot their first arrows. Step back behind the Shooting Line and walk to the far right side of the range.

Blow the whistle 2 times and tell the students they may pick up their bows and walk to the Shooting Line. Instruct the students to place one foot on each side of the Shooting Line facing the target.

Blow the whistle 1 time, and tell the students they can take an arrow out of their quiver and nock it on the string. Some instructors like to wait until they are with the student before they allow them to take their arrows out of the quiver. This may depend on the age and maturity of the group you are teaching. Explain again if they are to wait until you are watching them before they shoot their first arrow.

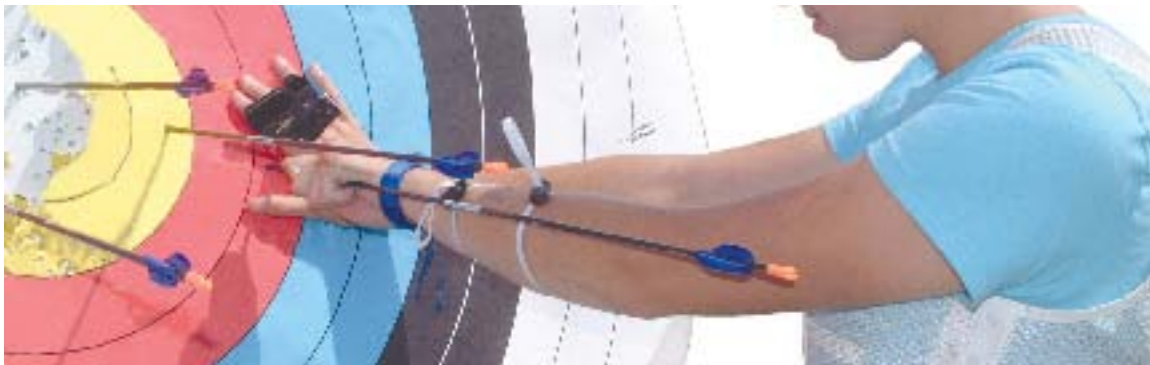
Walk down the line watching and assisting each archer, making any corrections they need in order to shoot their first arrow. The most important part is to see that they are doing all of the procedures correctly and they are not going to hurt themselves. After you watch them, and they seem alright, instruct them to shoot the rest of their arrows while you continue down the Shooting Line to work with the rest of the archers. You may need to remind those that are finished to step back off the Shooting Line, put their bows on the rack, and wait behind the Waiting Line.

After everyone has completed shooting their 3 arrows, and everyone is behind the Waiting Line with the bows on the rack or stand, blow the whistle 3 times and announce that the archers may WALK to the Target Line and wait for further instructions. If there are arrows on the floor or ground between the Shooting Line and Target Line, they must be picked up as the archers walk to the Target Line. If the arrows were not shot by the archer picking them up, they should be given to the archer who shot them or to the instructor.

If archers are sharing bows, blow the whistle 2 times, and allow the second group to come forward from behind the waiting line to the shooting line. Blow one whistle for them to begin shooting and follow the same instructions as for the first group. You can repeat this until everyone has shot their arrows, then blow the whistle 3 times for the archers to move forward to the targets.

## Pulling the Arrows

With all of the archers on the Target Line, explain how to pull the arrows out of the target correctly. Only one or two archers should pull their arrows out at one time. They should stand to the side of the target, put one hand on the target, with the other hand touching that hand. Look back to make sure no one is standing behind, and pull the arrow straight out. Explain that if they pull the arrow out from near the nock end, it is easy to bend or break the arrow. After pulling each arrow, they should place it in their quiver or on the ground before pulling out the next arrow. In some programs the instructor may ask only one archer from each target to go forward and pull all the arrows.



# Archery Activity

Tell your students that they may begin to pull their arrows, while you closely watch for safety and keep the archers on the sides of the target.

After pulling their arrows, they may return to behind the waiting line.

## Continue Practice

Let the archers shoot a few more ends, reminding them to feel their alignment as in the 1-2-3 Alignment Drill and to release the string in the same motion as the 1-2-3 Release Drill.

As the end of the class nears, have the students again approach the shooting line without their bows. Review the 1-2-3 Alignment Drill and the 1-2-3 Release Drill. Explain that if they really want to learn to shoot, they should practice these skills at home in front of a mirror.

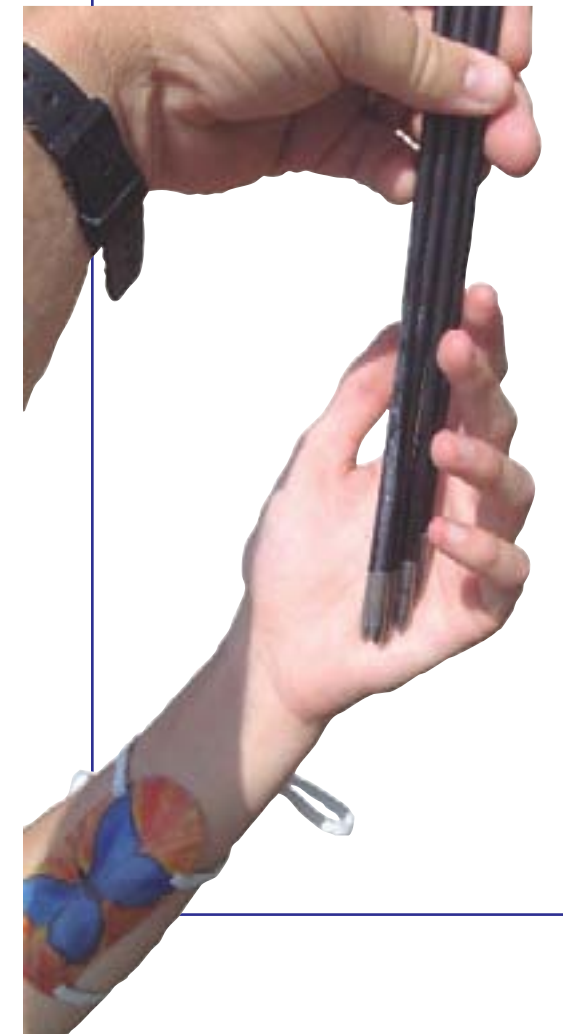
Show the students how to put their equipment away, and remind them to remember which bow and arrows they are using for the next class.



## Holding Arrows Safely

*After arrows are pulled from the target, they should be either be placed into the hip quiver or carried back to the Shooting Line and placed in the ground quiver.*

*When handing arrows to an archer, place the points in the palm of their hand as shown. To safely carry arrows, cover their points with one hand, and hold loosely near the fletching with the other hand. Carry arrows with both hands.*



## CHAPTER FOUR Steps of Shooting

### 1. Stance & Posture

Place one foot on each side of the shooting line. Find a comfortable balanced stance with your feet shoulder width apart. Beginners should start with a square stance—feet and shoulders perpendicular with the shooting line.

Stand straight, keeping your ribs and chest down, and your hips tucked under your body. Keep your shoulders down and relaxed.

Archers shooting in a wheelchair should place one wheel on each side of the line.



### 2. Nocking the Arrow

Place the arrow on the arrow rest, holding the arrow close to the nock. Keep the index fletch pointing away from the bow. Snap the nock of the arrow onto the bowstring under the nock locator (or between the nock locators if there are two).

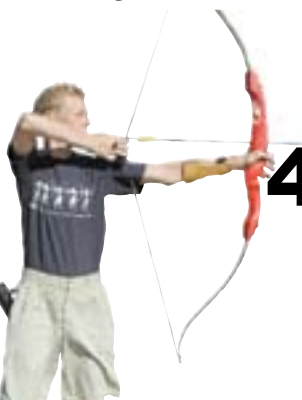


### 3. Set

Set your bow hand on the grip using only the web and the meaty part of your thumb, with your knuckles at more than a 45 degree angle and your thumb pointed towards the target. Keep your bow hand in place throughout the entire shot.



Set the first groove of your first 3 fingers around the bowstring creating a hook. Slide hand snug up against nock of the arrow. Keep the back of your drawing hand flat and relaxed.



### 4. Set-up

Raise your bow arm towards the target, while keeping your shoulder down and aligning your chest perpendicular to the target. Your drawing arm should be near the level of your nose. Your bow arm elbow should be rotated so it is straight up and down.



### 5. Draw / Load

Draw the string back in a straight line from the set-up to the side of the face anchor point. As you approach your anchor, set the drawing arm shoulder back and down as far as possible, until your elbow is directly behind or a little higher than the arrow. Anchor has not yet been set.



### 6. Anchor

Draw the string to the side of your face, placing the tip of your first finger on the corner of your mouth. Keep your hand snug against your face folding your thumb down and your little finger towards your palm.



### 7. Transfer / Hold

At full draw, transfer the weight of the bow from your arms and shoulders to your back.

Bring your elbow directly behind the arrow. Hold this position with your back muscles.



### 8. Aim / Expand

Look at the target, or through the sight, while keeping your focus on your form. Line the string up down the center of the bow.



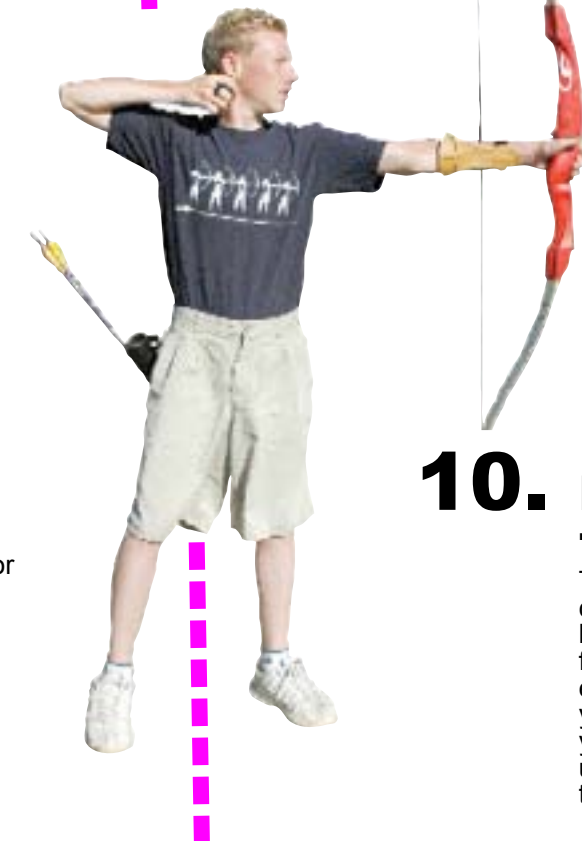
### 9. Release

Begin a slight expansion from the center of your chest as you allow the string to leave your fingers, pushing them out of the way. It should feel as if the string has gone through your fingers. Continue the expansion and follow through as in the Release Motion Drill.



### 10. Follow-through

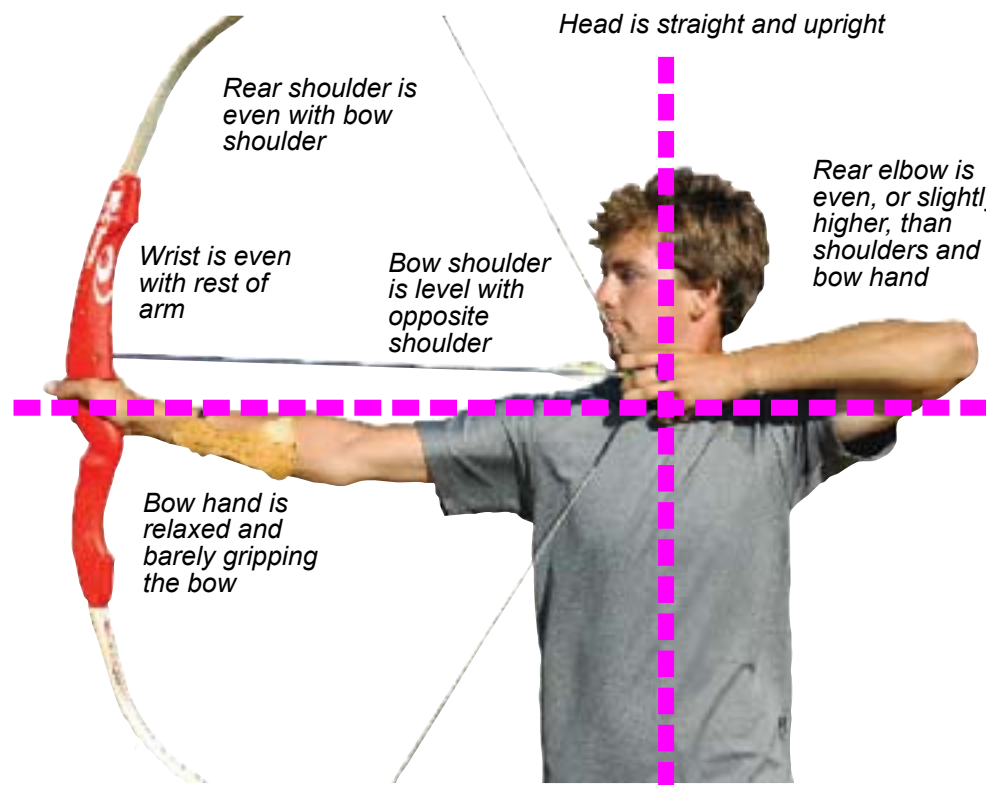
The drawing hand continues back beside neck with fingers relaxed, ending up behind your ear. Maintain your follow-through until the arrow hits the target.



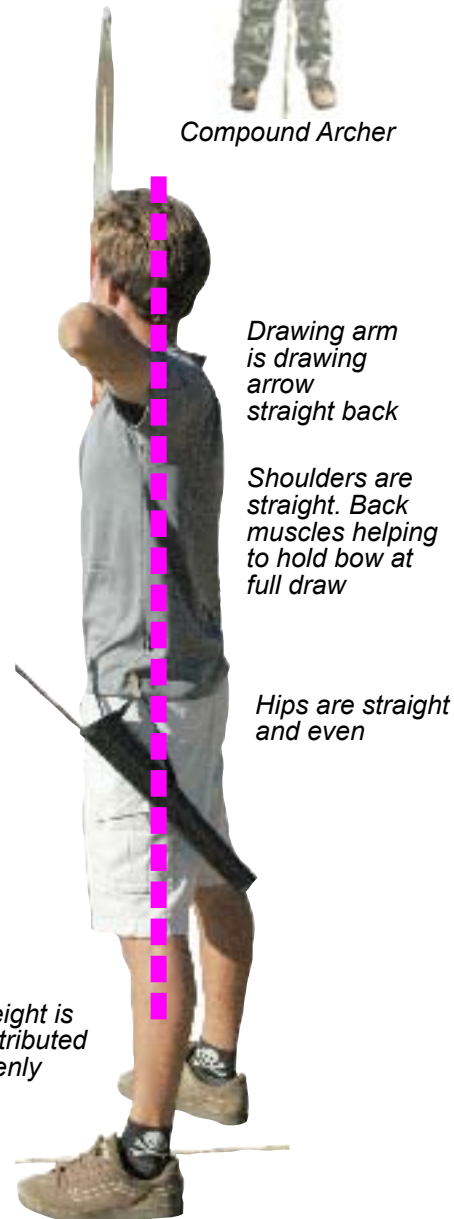
# PROPER SHOOTING FORM

This instructor training course can teach recreational program directors the correct way to coach proper shooting form.

The basic form—standing straight and tall like the letter ‘T’—is widely held as being the best and easiest to coach beginning archers.

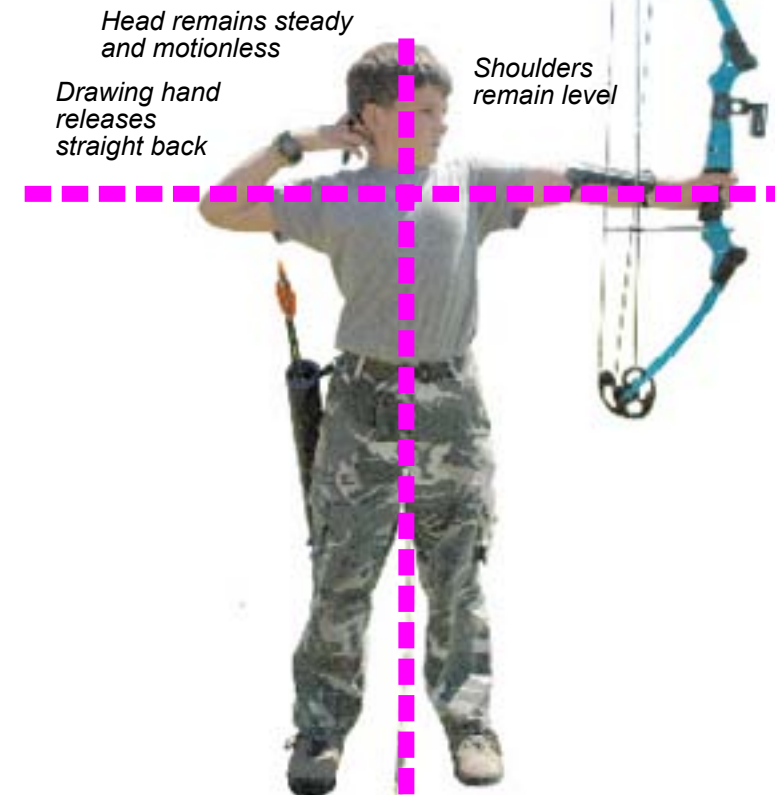


Compound Archer



# PROPER RELEASE

The shot form isn't finished when the arrow is released. Just like swinging through a golf shot or a bowling ball release, an archery release has the same relaxed motion.



The actual release with a bow should be the same as the 1-2-3 Release Motion Drill that was learned on Page 10.

The fingers of the drawing hand should remain relaxed, and the hand should remain in contact with the archer's face and neck. Follow the jaw line throughout the motion, finishing with the fingers touching the neck, just below the ear.



## Finger Tab

Archers most often use some design of finger tab—a flat piece of material that separates the fingers and protects them from the bowstring. The string is held deep—often at the first joint of the fingers.



“3-Fingers Under” for beginning archers

- Helps to keep from pinching arrow off the rest
- Is preferred by barebow archers
- The string angle through the arrow nock can cause the nock to come off the string, especially with compound bows.

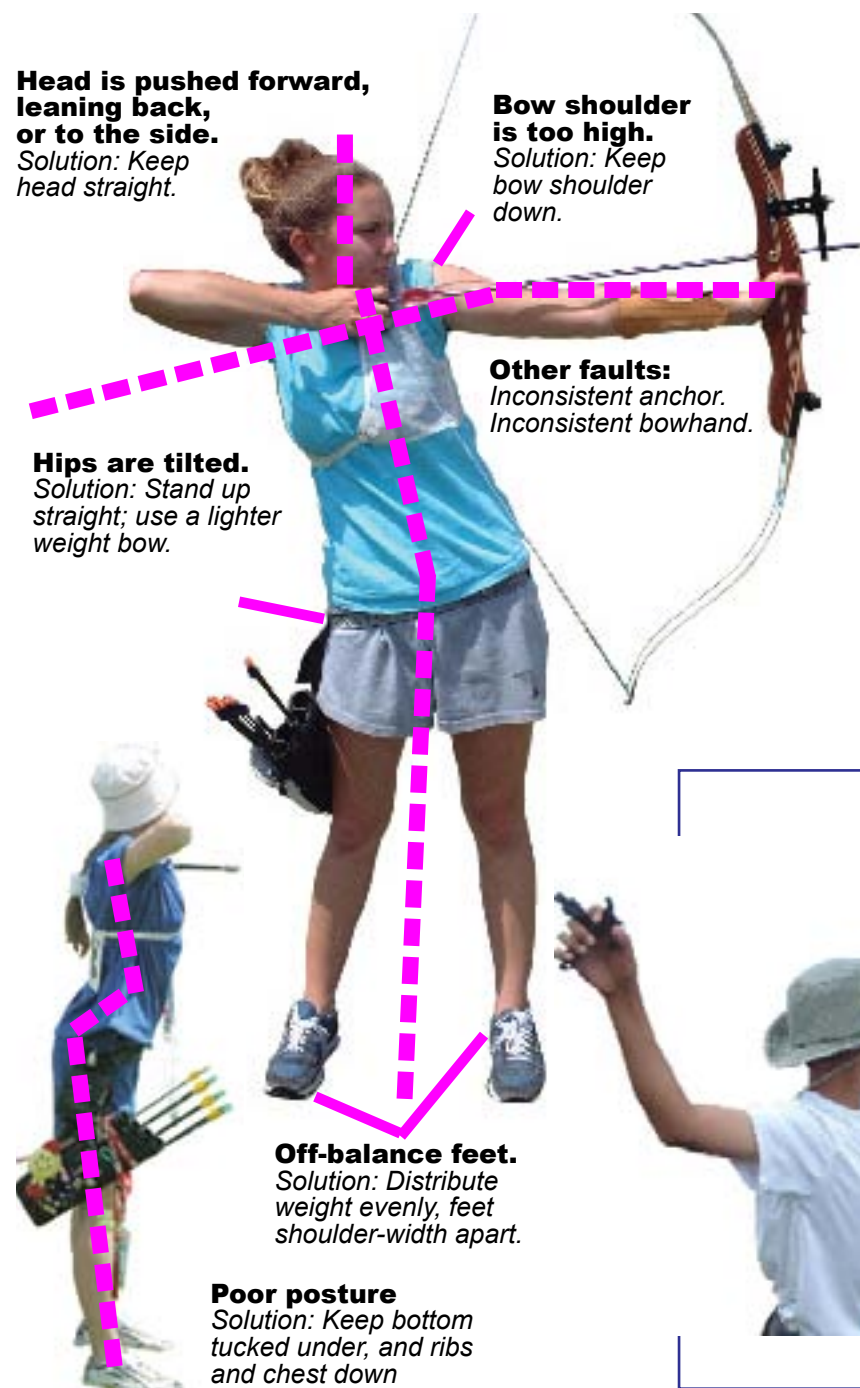


“Split Fingers” for intermediate archers

- Keeps the string more nearly straight through the arrow nock.
- Is often preferred by target shooters
- May cause the archery beginner to pinch the arrow off the string, especially short compound bows.

## IMPROPER SHOOTING FORM

When an archer's form is out of alignment, accuracy and consistency suffers. Misalignment can be caused by factors including trying to shoot a bow that is too heavy, or that has too heavy a draw weight. Here are some areas to look for:



**Head is pushed forward, leaning back, or to the side.**  
Solution: Keep head straight.

**Bow shoulder is too high.**  
Solution: Keep bow shoulder down.

**Other faults:**  
Inconsistent anchor.  
Inconsistent bowhand.

**Hips are tilted.**  
Solution: Stand up straight; use a lighter weight bow.

**Off-balance feet.**  
Solution: Distribute weight evenly, feet shoulder-width apart.

**Poor posture**  
Solution: Keep bottom tucked under, and ribs and chest down

### Positive Reinforcement

Correcting improper form is where the “coach” in you really comes out. It’s tempting to tell the archer what he is doing wrong, but it’s always better to tell him how to do it right.

When coaching an archer, identify in your mind the improper form he is using, but only verbalize what is needed to correct it. For example, if you see an archer’s head is crooked, rather than saying “Your head is crooked,” say “Keep your head straight.” This gives the archer positive instruction and what to do to properly execute the shot.

After you have given your positive instruction, watch the archer execute another shot, and compliment him-her on any improvement you see. This tells the archer that you are paying attention.

### Improper Release

Whether shooting a recurve or compound bow, an archer may slip into this improper release form.

Often called “peeking,” when the archer is trying to see the arrow fly to the target, or “plucking” when the draw hands moves suddenly away from the face. The bow hand also has an overly strong grip on the bow which has caused the bow to swing to the left

Solution: Keep the bow hand relaxed, and continue to draw the bow directly back throughout the release.

## Teaching Techniques CHAPTER FIVE

Now that you have learned how to shoot, it is time to learn how to teach. You have already learned more than your beginning students need to know to begin shooting. You must learn how to “Keep it Simple” when working with new archers.

### Coaching with Positive Communication

This is one of the most important aspects for the instructor to learn throughout the course both when teaching range control and rules, and when teaching how to shoot archery. The positive approach will ensure that archers have a positive experience during their archery activity. The positive approach emphasizes praise and rewards to strengthen desirable behaviors, whereas the negative approach uses punishment and criticism to eliminate undesirable behaviors. (from the publication *Coaching Young Athletes*) Communicating with positive statements will create a positive atmosphere in any program. It will also help your credibility, and the participants will look up to you more and cooperate better.

### Teaching the New Archer to Shoot the First Arrow

During the safety/orientation class, the instructor must watch each new archer shoot the first arrow. All of the archers have heard the procedures, done the drills, and watched the shooting demonstration. Some may have shot somewhere before. There will, however, be some who just don’t get it. They may try to stick the arrow through the sight ring, hold the bow backwards, or just stand there doing nothing. The instructor needs to watch each individual shoot the first arrow to avoid injury.

Since you have to get through the whole class in a short amount of time, you’ll need to get each archer shooting quickly. When working with new archers, stand with one foot on each side of the line facing them, or stand slightly behind the line. You need to have both hands free to give instructions and handle any problems.



### “Gumby”

#### The “Gumby (Flexible Toy) Technique”

The best way to help archers get the feel of shooting a bow is to use your hands and mold them into the proper position. Ask for their permission, then mold the archer into the proper form as you would a flexible “Gumby”. Use hands-on to get the body in to the proper “T” position. Mold the string fingers into a hook and place the hook around the string. Put the other hand into the proper bow hand position.

Explaining and demonstrating is somewhat ineffective when teaching new archers the procedures of shooting. The best way is to put the bow in their hand, the string on their fingers and let them see how it is supposed to feel.

Never take a bow out of a child’s hand to “show him how it’s done”. They have already seen you demonstrate a shot during the safety orientation class. Keep the bow in his hands, and create a statue of an archer.

Once you know how a shot is executed and what an archer is supposed to look like, that is all you need to teach. Whenever you see something that isn’t right, just tell the archer how to do the skill correctly. Speak plain and simple English. If it makes sense to you, it will probably make sense to them. Try to relate what you are saying to something they will understand.

Here are some key factors to watch for when helping a new archer shoot the first arrows:

## Safety

Make sure the archers are not going to hurt themselves. When they are at full draw, look at the path the string will make towards the bow. If there is any part of their body (elbow, chest, shoulder) in the way, they are going to hurt themselves. You should always try to catch this before it happens and stop them from shooting until you can take care of it. First check their bow hand position, and then try rotating their bow arm elbow and relaxing their shoulder. If these don't work, you can open their stance or put on a longer or second arm guard as a last resort.

### Special Caution for Ladies:

Make sure the string is not going to hit the chest. They should draw the string back close to the arm. Make sure they stand up straight, keep their bow shoulder down and relaxed, and their head straight up over their body. Watch to make sure the chest is not between the bow string and the bow when the string is released.

## Procedures

The next step is making sure they understand the procedures and are doing everything correctly. They must understand how to nock the arrow, hold the bow, and hook the string. Keep these simple, putting their hand on the grip and hooking their fingers around the string for them. Once they get the feel, they will be all right. You may need to nock their first arrow for them. Nocking the arrow can be the most frustrating part of shooting for new archers. Once they see the arrow nocked on their bow and shoot an arrow, they'll have an understanding of how everything is supposed to look.

## Body Alignment for Strength

The next thing that should be worked on is getting the archer in to a natural "T" position with correct body alignment. This will enable shooting from a stronger body position. Remind them to get the feel they had in the 1-2-3 Alignment Drill.



## Positive Approach in Teaching Archery

There are two common errors new instructors make while trying to help:

1. Only pointing out errors, telling the archers what they are doing wrong. Example: "You're gripping the bow."
2. Telling them not to do whatever they are doing wrong. Example: "Don't grip the bow."

These statements contain no information about what the coach wants the archer to do. A positive coaching statement would be, "Keep your bow hand relaxed." Coaches who give positive instructions are respected by athletes. Negative instructions lower athletes' self esteem and make them not want to listen.

It is also important to get your athletes thinking with positive self talk. This is a habit they master for a lifetime in sport. Positive self talk is a common trait among champions in sport, and successful people everywhere. Your mind cannot visualize not doing something. Try this: "Don't think about pink elephants. Try really hard not to think about pink elephants. I don't want you to think about pink elephants." Now what are you thinking about? Now, if someone says "Think about green rabbits, little green rabbits hopping around the yard", would you be thinking about pink elephants?

Coaches are teaching the most advanced archers to visualize and concentrate on what they want to make happen. Start this process by teaching the newest archers to think this way. If you teach with negative statements, don't be surprised if your archer goes to a tournament thinking, "Don't choke, don't choke, don't choke". What will happen to this archer?

## The "Oreo Technique"

First you must learn how to make a proper coaching statement. An easy reminder of this method is to give your students a cookie; an Oreo cookie. An Oreo Cookie has 3 parts. The cookie, the cream in the middle, and the other cookie. Here's how it works as a coaching statement.

**The Cookie** - Find something the archer is doing right and compliment them. This reinforces correct behavior and opens them up to your ideas for improvement. ("Your release looks real smooth.")

**The Cream** - Give the archer positive instruction on how to perform a skill correctly without referring to incorrect action. ("Keep your bow arm up until the arrow hits the target.")

**The Cookie** - Follow-up with a compliment specific to the skill you have just taught. ("Your bow-arm looks much more solid now. Good shot!")

You seldom need to tell a new archer what they are doing wrong.

## Archers with Handicaps

Archery can be enjoyed by people with a number of physical limitations. If you have such persons in your class, ask them what they are capable of doing (moving their arms, gripping, holding a bow, pulling a string back). Work within those stated capabilities.

Archers who are in wheelchairs follow the same shooting stance that an able-bodied archer does. The wheelchair wheels straddle the shooting line and the arrows are kept in some form of quiver. The archer may have someone else retrieve and score arrows.

Select bows short enough and lightweight enough to draw back. Keep your comments positive to reinforce the experience.



Shooting Line

## Non-Threatening Hands-On Instruction

When working with archers, particularly beginners, instructors frequently must use their hands to place an archer in the proper position or to correct shooting form. Although close contact with the shooter is essential for effective instruction, the instructor must be careful to avoid any action that could appear improper or cause anxiety for the student.



This coach is assisting in keeping archer's shoulders level



This coach is assisting in archer's alignment.

Respectful, non-threatening treatment of shooters begins with a demonstration. If possible, use an assistant or a child you know to demonstrate how you will make corrections in posture or position. Telling the shooter what you will do reduces anxiety.

Tell them you are going to push the hip forward, raise an elbow, reposition the hand, or turn the hips. Avoid touching the hips if at all possible. Ask archers if it is all right to touch or move them into the position you would like. If they say no, you will have to demonstrate it for them.

### PROPER HAND POSITION

The posture of your hands when contacting the student can also ease anxiety. Except in an unsafe situation where immediate action is required, it is seldom necessary to "grab" a student or their equipment.

Hold your hands flat and firm with your fingers straight out with your thumbs on the side. This is a less threatening way to adjust body position.

Pressure from the palms or backs of flattened hands can accomplish most positioning and controlling needs.

# 7 Drills & Skills

Each drill and skill should be taught with the following outline:

## 1. Introduce the Drill/Skill

Introduce each new Drill as it appears in the class plans. Use the introduction from this chapter. Introduce the Skill by telling the students the name of the Skill, and why it is important for them to learn and practice.

## 2. Explain the Drill/Skill

Next explain the drill/skill as described in the Technique portion for each drill/skill. Explain each step, or the entire motion. The explanation may be done at the same time as the demonstration.

## 3. Demonstrate the Drill/Skill

Demonstrate the skill for the archers. The demonstration can be done live by the instructor, but only if it can be done correctly. An alternative would be to use an advanced archer who can perform the drill correctly, or to use a video taped image of the drill being done properly. As a last resort, refer to the pictures in the Drills and Skills booklet. You should never demonstrate a drill or skill incorrectly.

## 4. Practice and Correct the Drill/Skill

Next have the students practice the drill.

## 5. Evaluate the Drill/Skill

Watch archers and let them know how they are doing with the drill or skill. Continue correcting them until they have it perfected, and can repeat the drill consistently without any help.

On the following pages, are seven initial Drills & Skills you can use to teach new archers.

(Drills & Skills are reprinted from NADA's GoArchery!® Program. Copyright NADA. See the program for the complete series of Drills & Skills)



## 1 The 1-2-3 Alignment Drill

The 1-2-3 alignment drill is a simple exercise designed to get the archers to feel the body in the proper alignment for a beginning archer. They will also learn to keep their shoulders down while raising their arms and maintaining their posture.

### Technique

Make sure the students have the correct stance before starting the drill. At first it may be difficult for them to raise their arms without raising their shoulders. The shoulder shrug exercise is designed to help them get the feeling of using the proper muscles to keep their shoulders down. You can also help them by holding your hands on their shoulders while they raise their arms, or by placing your hand over their shoulder blades, making sure they keep them in place while raising their arms. Students can pair off and assist each other in this exercise.

Quickly remind them to maintain proper posture during this exercise, keeping the bottom tucked under and their ribs and chest down.

During step 2, make sure the head remains straight over the center of the body and turns towards the target. This should be natural and relaxed. Maintaining proper alignment is important in step three. Students may turn their upper chest away from perpendicular to the target. Make sure they keep their upper body square while bringing their hands to their faces. Suggest that they practice this drill at home in front of a mirror so they can get proper feedback. They can watch their shoulders in the mirror to see if they are rising. They can also see a perfect "T" at the completion of the exercise.

(See Page 16 for full descriptions)



## 2 1-2-3 Release Motion Drill (Without Bow/then with String Loop or Stretch Band)



### Technique

Make sure the archers are in the proper alignment position at the beginning of this drill. The drill can be added at the end of the 1-2-3 Alignment Drill. Start by going through the motions at a slower speed so the archers can feel the proper motion. Then have them move through the motion quickly, on the count of 3, as if actually releasing the string.



After they have learned the skill with out any aids, they can progress to using a stretch band or string loop. (Use string or even finger of opposite hand if a stretch band is not available). Make sure the back of the hand and fingers are relaxed before, during and after the release. The release hand should stay in contact with the face, jaw or neck and finish at the back of the neck, just below the ear, with the fingers touching the neck. The motion should be completed with the upper arm and elbow moving back with the shoulder blade moving towards the spine (advanced). The key to this motion is keeping the hand moving straight back, remaining in contact with the face for the side of face anchor or the jaw line for the under the chin anchor.



Also make sure the string fingers and hand remain vertical, and the fingers stay close to the neck. A common tendency is for the archer's hand to rotate counter clockwise ending up sideways and for the hand to move too far back to the shoulder, requiring too much rotation in the shoulder.

**Students should practice this in front of a mirror, making sure that the hand is following the correct path as shown in their guide.**



*This archer keeps the elbow up, the fingers touching the neck. Some horizontal rotation of the hand may occur, but the fingers should remain near the neck.*



*This archer allows the hand to rotate, leave the neck and rest on the shoulder. This allows too much rotation in the shoulder and causes the elbow to drop.*

## 3 Stance and Posture (With Bow)



A good stance and proper posture set up the foundation for good shooting technique and greater stability. The open stance, turning the feet 30 degrees towards the target, helps maintain proper posture. The hips should stay in line with the feet, while the shoulders line up with the target.

### Technique

Place one foot on each side of the shooting line with feet shoulder-width apart. Keep feet in the same place until you are finished shooting your arrows. Throughout the shot, keep your hips tucked under your body and your chest and ribs down. Tilt your entire body slightly forward so 60%-70% of your weight is on the balls of your feet.

The stance is introduced quickly during the first session, but needs greater attention later in the course. Proper posture is re-emphasized in other drills and skills, including the 1-2-3 Alignment Drill.

### Practice and Correction

A wide stance is important for proper posture. If an archer is leaning back away from the target, check the stance first. Make sure feet are wide enough apart. Also make sure beginning archers keep their feet in the same place from one shot to the next. Once their feet are planted, they should keep them there.

Looking face to face at the archer, make sure the archer is standing up straight. Even the slightest lean backwards, away from the target, can cause the bow arm shoulder to rise and string clearance problems on the chest. First check the stance. It is difficult to stand up straight when the feet are too close together. You can stand the archer up straight by placing one hand just under the drawing arm, and the other hand on the bow arm side waist.

Push on each position to stand the archer up straight. Then keep your hands there as the bow is raised and drawn. This will provide feedback as to where he starts to lean back and the feeling of standing up straight. Always explain what you are going to do and ask the archer's permission before touching the archer.

Check to see that the shoulders remain down throughout the shot sequence. The bow arm shoulder will typically be below the arrow.

**(See Page 22 for full descriptions)**



## 4 Bow Hand Position Drill and Skill

There is one common bow hand position that is used by all of the top archers in the world. This bow hand position aligns the bones of the arm correctly behind the force of the bow, and allows for proper contact with a relaxed bow hand.

### Technique

Start by raising the bow arm and holding your bow hand out towards the target. Make a Y with your fingers and your thumb, and then allow your fingers to relax. Your hand should end up with your knuckles at a 45 degree angle and your thumb pointed towards the target. The pressure of the bow grip should be centered as shown.



## 5 Setting the Hook Drill & Skill

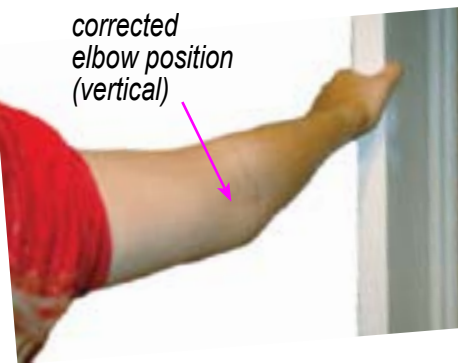
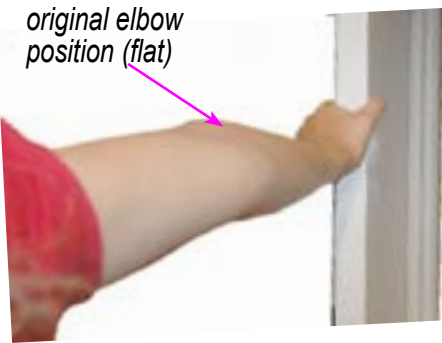
This drill helps you learn to place the fingers on the string and keep your string hand relaxed.

### Technique

The string should go in or behind the first groove of the first three fingers. Keep your fingers and the back of your hand as relaxed as possible throughout the shot. Look to see that the string is placed on your fingers and that your fingers are placed on the string in the same location every time. A great way to practice relaxing your string hand is with a heavy bucket or a book bag. Hook your fingers around the handle of the bucket or the top loop of a book bag. Let it hang by your side, keeping your entire hand relaxed, except for the muscles you need to maintain the hook.

### Skill

Now try the same thing while shooting your bow. Keep your hand and arm relaxed, from the hook all the way to the elbow.



## 6 Elbow Rotation Drill

To allow better alignment of the body, and a stronger bow arm and shoulder position, you will learn to rotate your elbow out of the path of the string.

### Technique

Hold your hand against a door edge, and practice rotating your bow arm by rotating your upper arm clockwise (RH) until the inside of the arm is straight up and down.

Make sure to keep the shoulder down and back. Keep your bow hand in the proper position, with your palm down and your knuckles at a 45 degree angle.



## 7 Side of Face Anchor

The anchor determines where the arrow is pointed. The side of the face anchor is great for beginners, since it is easy to find and repeat, and places the line of the arrow near the eye for easy aiming.

### Technique

At full draw, place the first finger of your drawing hand on the corner of the mouth. Pull the hand in snug to the face. Keep the back of the hand and fingers relaxed while coming to the anchor position. Make sure the anchor is in the correct place and the hand is held firmly against the face.

Line the string up with the center of the bow.

# TEACHING A NEW ARCHER

Even though the archer shoots the arrow, the instructor—or coach—has a great influence on it's accuracy.

These primary skills include being a good listener—learning what the expectations of the archer really are, and learning how to provide positive instructions without the negative criticisms new athletes often hear from other well-meaning coaches or friends. This level of positive trust and communication between the coach and

the archer is critical, no matter how new to the sport the archer is.

In order to provide this feedback, the coach needs to see what's going on. Here's a sequence of coaching positions that are helpful in seeing how an archer is executing a proper shot.

Safety is always the primary concern for the coach.

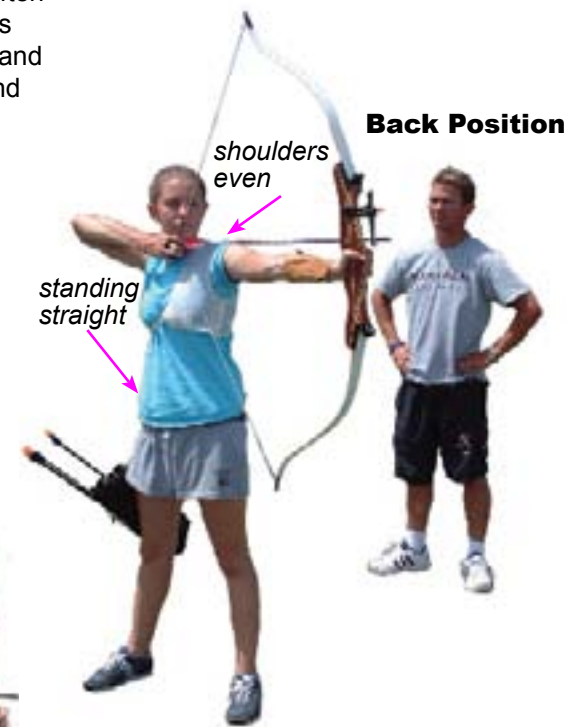
Always remain behind the shooting line slightly behind the archer, and NEVER grab at the equipment!

## Front Position

Look for:

- Proper Stance
  - feet shoulder width apart
  - hips aligned with feet
- Straight Body Alignment
- Shoulders Level and Relaxed
- Relaxed Bow Hand
- String Hand Flat and Relaxed
- Drawing Arm and Elbow Even or slightly elevated.

### Front Position



## Back Position

Look for:

- Correct Arrow Length for Archer
- Shoulders Even and Level Across
- Head Straight Over Body



## Rear Position

Look for:

- Posture
  - Bottom tucked under
  - Ribs and chest down
- Bow Straight Up and Down
- Head Straight
- Body Stable
- Proper Release Motion

## ARROW PATTERNS

If the arrows are all identical, and if the archer does everything exactly the same shot after shot, the arrows should hit one on top of another. Here are some common reasons why they might not. When correcting an archer's form, always use positive statements—identifying what the archer must do to correct the form.

### Left Arrows

- causes:*
- Gripping bow too tightly
  - Aiming with the wrong eye
  - Peeking at the target upon release (Right hand archer)
  - Pulling the string away from the face (right handed archer)

### Low Left Arrows

- causes:*
- String hitting the chest of a right-handed archer
  - Canting (tilting the bow to the left)
  - Weak bow arm

### High Arrows

- causes:*
- Heeling the bow (tipping up)
  - Pulling the bowstring back too far
  - Raising the bow arm during the release
  - Pulling the release hand down during the release
  - Low drawing elbow

### Right Arrows

- causes:*
- Gripping bow too tightly
  - Aiming with the wrong eye
  - Peeking at the target upon release (left handed archer)
  - Pulling the string away from the face (left handed archer)

### Low Right Arrows

- causes:*
- String hitting the chest of a left-handed archer
  - Canting (tilting the bow to the right)
  - Weak bow arm

### Low Arrows

- causes:*
- Dropping the bow arm upon release
  - Moving the head forward to the string
  - Collapsing the bow arm
  - Creeping (anchor creeps forward)
  - Leaning towards the target
  - Arrow nocked above nock locator



# Archery Activity

## Shooting Activities

There are many ways to get kids to enjoy the sport of archery. Be creative and develop ways to keep the kids interested and having fun at the archery range. You can use some type of achievement program, competitions, and games to add fun to your classes. Try to finish every session with a shooting activity to keep them wanting to come back for more.

### Scoring a Target

Scores can be shot in many different formats. There are many rounds that are commonly used by the archery organizations, or you can pick one that works well for you, keeping in mind the amount of time you have, the number of arrows each kid can shoot, the types of targets you have and the distances you can shoot.

Each time the archers go to the target to score their arrows it is called an "end". Your archers can shoot 3 to 6 arrows per end, and score from 1 to 6 ends. The JOAD Round scores 12 ends of 3 arrows, or 6 ends of 6 arrows for a total of 36 arrows, at a 40 cm. target face, 18 meters away. You can plan your competition with more than one distance for variety. Target faces can also be different sizes, with bigger targets for the longer distances. Remember to keep the size of the target and the distance so that everyone hits the scoring area every time. This will vary with the age, abilities or disabilities of the archer, and the quality of the equipment they being used.

### Achievement Programs

There are many ways to reward your archers for their achievements. Awards can be very simple, like a gold star for hitting one arrow in the gold, or more complex awards for achieving different scores with 30 arrows. One camp simply gave ribbons to the archers for hitting all of their arrows within a certain color – white for all the arrows in the target, black for black and better, blue for blue and better, red for red and better, and yellow for all in the gold.

There are several achievement programs offered through the various national archery organizations. The USA Archery has the Junior Olympic Archery Development program, which awards pins and certificates based on 30 arrow scores and different distances and target sizes.

The NFAA also has achievement programs for adults and youth with patches and awards for accuracy and participation.

### Competitions

At the end of every session or week of camp, you can hold an archery competition. Winners can come from each class, or scores can be combined to name the camp champion. Give the tournament a name with a lot of importance, like the Camp Wannahockalooie Olympics or the Champion of the World. You can also make the highest scorer the King or Queen of the day and hang a Gold Arrow around the neck. Be creative and hype up the event. If

your camp has a theme, try to match the competition, targets and awards to that theme. Chose a format from the suggestions above and make a scorecard for the kids.

Team rounds are also fun for the campers. They seem to have more fun when they are competing with others. For many of the games or even the competitions, you can mix up the group into teams and score them together.

## Games

### Fun Targets

Another opportunity to be creative and go with a camp theme is in picking targets to shoot. Kids love to see what will happen when they shoot at different objects. You can put an apple on a mannequin's head, shoot at stale brownies from the kitchen, or hang stuffed animals in front of the target. Balloons are always a favorite, and if you put a little flour in them, they will make a little smoke cloud when they pop!

Action targets are the most fun—anything that moves or that you can roll across the range in front of the targets. Kids love moving targets. Also try using some "Rubber Blunt" arrow points. Shoot these at 2-liter soda bottles with the caps on and they'll fly off when hit. Other types of knock down targets can be fun too. Another great activity is to have the kids draw their own targets, create

scoring areas and shoot them at the archery range. They can take them home afterwards for mom to hang on the fridge.

## Knock-Out

Every archer starts with 3 to 6 arrows. If they do not complete the challenge for each arrow shot, they will lose that arrow. When they run out of arrows, they are out of the game. You can allow the eliminated archers to shoot on separate targets, or you can have them pack up their equipment and practice their drills. Each end, give them a different challenge. Start easy, and increase the difficulty as

the game goes on. You can make the challenges easier or harder depending on how much time you have left and how soon you want to eliminate the archers.

For example:

•**First end:** Blue and better. The archers can keep the arrows they shot in the blue, red or gold. Have them leave the lost arrows under the target.

•**Second end:** Red and better.

•**Third end:** Eight and better.

If the number of archers left is getting small, or they are getting really low on arrows and you have more time, allow them to get an arrow back. For example, announce that if they hit an "X" they can get an arrow back.

Or create some risk by telling them they can keep every arrow that they shoot in the Gold, and they can have two arrows back for every arrow they shoot in the Black.

## Survivor

Divide the group up into teams. Each team should have its own target. Each archer on a team shoots one arrow at a time, one after the other. Whichever archer shoots the lowest scoring individual arrow is eliminated from the team. When there is only one archer left per team, have them shoot off one arrow at a time. The lowest scoring archer is eliminated until only one remains. You can write the winner a check for one million dollars.

## Battleship

Use index cards or sheets of paper sized according to the ability of the archers. Draw different ships on the cards and assigned from 1 to 5 points. You can also include blank cards. Each individual or team will pin the cards up with the blank side showing on the target of their competitor. The archers will shoot 3-6 arrows each or 12-15 as a team. Score by the value of the ships hit.

## WarCraft

Divide the class up into four or five teams. Each team will begin on its own target. Create your own targets to go along with the theme. Assign imagined shooting challenges for each target. On target One, the archers will shoot on un-even ground. Have them stand on one leg to shoot. On target Two, the archers shoot from under a bush, holding their bows sideways. On target Three, the archers have to shoot in the "dark". Have them shoot with their eyes closed. Their team mates will help them aim. On target Four they are shooting armored trolls. They will have to place two arrows within a small drawn ring on the target to "pierce the armor".

Be creative and come up with your own challenges.

## Awards

You can make some simple awards or order some from the archery

organizations. You can have your own certificates printed which can be for participation or for achievement levels. Use old broken arrows, cutting them 6 inches long and paint them with metallic gold paint. This can be given as the "Golden Arrow" award. You can mount it on a plaque, cut from a slice of a tree. Buy rolls of ribbon and use stickers or craft pens to write award levels on cut pieces.

## Scavenger Hunt

On each target mat, put up something different to shoot at. You can put up a small target, a couple of CD's, empty water bottles, or small posters. Each archer is assigned a target. When they hit whatever the target is on their mat, they can move on to the next target. They win after they have shot every target and returned back to their original shooting position. This is a great event when using themed targets near Holidays.

## Tournaments

Archery tournaments sanctioned by national archery organizations are a great way to get your participants involved in the sport. Your agency can sponsor a team to the event, which may be local or nationwide. Several youth archers recently have made it all the way to national tournaments starting out as beginner archers at their local recreation program.

Local archery clubs can be great at helping you plan or conduct your own tournament. Contact the national archery organizations on page 52 for the names of clubs near you.

### "How do I score?"

Shoot 3 arrows for each "end" and fill out a scorecard (write down higher scores first) as you go until you've shot all your ends. Add your End Scores together to make your Running Score.....like this:

END	ARROW SCORE			HITS	END SCORE	RUNNING SCORE
1	8	8	6	3	22	22
2	10	7	4	3	21	43
3	10	5	M	2	15	58

"miss" .....and so on until finished!



## CHAPTER SIX *Class Plans & Activities*

As an archery instructor, you'll balance instruction of shooting technique with some fun and games. For younger kids and in more informal settings, it is important to make sure they are having a lot of fun. However, studies show that kids do enjoy activities more when they are learning new skills or working to improve their skills. Don't be afraid to help them learn better shooting technique, even if they complain a bit. You will have to watch the group closely and be aware of when they may have had too much and need a break for some fun and games.

The first class plan is explained in Chapter 3, the Safety Orientation Class. This class contains a lot of information, including the archery range rules and procedures, beginning drills, and the shot sequence. When working on the 1-2-3 Alignment Drill and 1-2-3 Release Motion Drill watch archers and try to get them to do the drill perfectly. Keep coaching them and encourage them to practice the drills as often as they can.

The second class should review this information, repeating and reinforcing all of the drills and skills. Near the end of the second class you can reward your students for their efforts by putting up a target face or some balloons. Always remind them to stay focused on their shooting form and the shot sequence, rather than aiming or hitting the target.

These Drills and Skills are adopted from the NADA GoArchery!® Program.

The "Drills" are methods of practicing that do not require the use of a bow, or use the bow without shooting an arrow. Students should be encouraged to practice these drills as much as possible at home until they master them. Some drills may also use a string loop or a stretch band. The students should practice some drills while looking in a mirror, comparing their form with the pictures. Whenever possible, they should seek the help of a parent or other adult to make sure they are performing the drills correctly as described in the booklet.



### Alignment Aids

*Stretch bands are made from latex or other rubber type materials. They can be used for warming up as well as a teaching aid. Surgical tubing can also work for this purpose, but can sting the hand a bit when you "shoot".*

*To make a string loop, have some 1/8" diameter cord available, cut in approximately 7 foot lengths. Help the archers tie the cord in a loop that is appropriate for their draw length. You can also tie off the end of the string to make a smaller loop to wrap around the hand to keep the loop from falling when shot.*

## *Equipment* CHAPTER SEVEN

Equipment selection depends on the archery program. Free shoot programs can use inexpensive fiberglass bows and wooden arrows. The more time archers spend at the archery range, the better equipment you should provide. The best archery programs have laminated wood/fiberglass recurve bows, properly-sized compound bows and aluminum, carbon or fiberglass arrows. No matter which equipment you buy, the key to cost savings is in equipment care. Bows that are properly cared for can last for years.

The best way to get the proper equipment for your program is to find a local archery pro-shop dealer that will help you select, order and set up the equipment for you. You can then return prior to each season and have the equipment inspected and repaired so it is ready for the kids when they arrive at your program.

Many times you will be better off buying a little more expensive or better equipment than economy equipment for your program. Better equipment will last much longer and give better results than less expensive equipment, provided it is properly maintained.

### PROGRAM EQUIPMENT GUIDELINES

One piece fiberglass bows with a molded rubber grip are very common in summer camp programs. These inexpensive bows can still be quite accurate when set up properly and when proper shooting technique is learned. These bows may have straight limbs, like a longbow, or a recurve design. They are very durable and will last for many years. Keep the draw weights light to match young archers.

### Recurve Bows

Laminated limb recurve bows come in both one-piece and "take-down". The limbs are made with fiberglass laminated with glue over a wood core. They can be easier to shoot, and have a much smoother feel. The "take-down" bows have a separate handle/riser section that the limbs bolt on to. This gives you the option of replacing a set of broken or twisted limbs at half the price of a new bow. There are many moderately priced take-down bows on the market. Recurve bows should be about the same length as the height of the archers using them, within a range of plus or minus 6 inches.

Recurve bows are draw-weighted and marked for a standard 28-inch draw. Roughly two pounds of draw weight must be added or subtracted for each inch of difference in draw length. So an archer with a draw length less than 28 inches will have a lower draw weight than is marked on the bow, and an archer with a draw length of greater than 28 inches will have a higher draw weight than is marked on the bow.

### Common Sizes

Bow sizes are matched by the height of the archer. Here are some generalities according to some sample ages:

- 48" bows for the smallest archers, 5-7 year olds.
- 54" bows for 8 to 10 year olds.
- 60-62" bows for 11 -14 year olds.
- 66" bows for the taller teens, adults and staff.

### Bow Weight

Keep the draw weight of the bows as low as possible, preferably 15-20 pounds. This is all that is necessary for youth programs. Heavier bows are difficult to pull, less fun, and increase the possibility and seriousness of injuries.



# CURRICULUM TIME LINE FOR A 5-CLASS SCHEDULE

## First Class Time Line

Hand Out Equipment	5 minutes
Introduce Alignment and Release Drills	5 minutes
Demonstration	5 minutes
Rules and Procedure/First Shot	10 minutes
Pulling Arrows	5 minutes
Practice	10-20 minutes
Put equipment away	5 minutes
<b>TOTAL CLASS</b>	<b>45 – 60 minutes</b>

## Second Class Time Line

Hand Out Equipment	5 minutes
Review Alignment and Release Skills	5-10 minutes
Practice	10 minutes
Introduce Stance and Posture Skills	5 minutes
Practice Skills	10-15 minutes
Targets or Game (Balloons)	5-10 minutes
Put equipment away	5 minutes
<b>TOTAL CLASS</b>	<b>45 – 60 minutes</b>

## Third Class Time Line

Hand Out Equipment	5 minutes
Review previous Drills	5-10 minutes
Practice	5-10 minutes
Introduce Bow Hand Position and Elbow Rotation Drills	5 minutes
Practice Skills	10-15 minutes
Targets or Game	10 minutes
Put equipment away	5 minutes
<b>TOTAL CLASS</b>	<b>45 – 60 minutes</b>

## Fourth Class Time Line

Hand Out Equipment	5 minutes
Review previous Drills	5-10 minutes
Practice	5-10 minutes
Introduce Setting the Hook	5 minutes
Practice Skills	10-15 minutes
Targets or Game (Balloons)	10 minutes
Put equipment away	5 minutes
<b>TOTAL CLASS</b>	<b>45 – 60 minutes</b>

## Fifth Class Time Line

Hand Out Equipment	5 minutes
Review previous drills	5-10 minutes
Practice	5-10 minutes
Introduce Side of the Face Anchor	5 minutes
Practice Skills	10-15 minutes
Competition or Game (Balloons)	10 minutes
Put equipment away	5 minutes
<b>TOTAL CLASS</b>	<b>45 – 60 minutes</b>



Instructor Demonstrating  
1-2-3 Release Motion Drill



Universal Draw-Length Compound Bow

## Compound Bows

Compound bows work at a pre-selected draw stop, and are adjusted to fit an individual archer. Shooting a compound which has not been fitted to the particular archer may result in poor shooting form and possible physical harm.

The exception to this guideline is a new type of compound on the market that has a continual draw like a recurve with no specific draw stop. It is called the Universal Draw-Length Compound Bow. It also has an easily adjustable draw weight.

Compound bows are commonly used in competitions, however only recurve bows are used in the Olympic Games.

## Bow Color

Any color is fine for the all-fiberglass bows. Insist on White Limbs only for

laminated recurve bows. Black fiberglass/wood laminated bows absorb heat from the sun when used outdoors, and have a tendency to twist. A suggested Ratio of RH to LH bows is 2 Left Hand bows for every 10 Right Hand bows. Most of the one-piece fiberglass bows are interchangeable, left and right handed.

## Arrows

Arrows are made of wood, fiberglass, aluminum or carbon. There are many different qualities of each. Arrows are ordered by length and by the draw weight of the bow which they will be used. It is best to get arrows for your highest draw weight bows. Inspect often for splinters, loose points and broken nocks. Store in a dry place either flat (with fletching suspended) or on their points

**Wood:** If your program has the most basic archery equipment, and the archers are going to shoot only once a week, then order inexpensive wood arrows. Quality wood arrows, usually called premium or tournament arrows, will last longer and shoot better. These are appropriate for camps with more advanced archery programs, trained instructors, achievement programs, and when shooting several times a week.

## Fiberglass:

Fiberglass arrows are a good alternative to wood arrows. The only drawback with fiberglass arrows is that they are sometimes quite heavy, but are more durable than wood.



**Aluminum:** Many low-end, mail order aluminum arrows bend easily in a camp setting. Look for arrows with a 7075-T9 or better alloy, such as the E75's or JAZZ Shafts. These can last for years and are easy to refurbish with new fletching and nocks.

**Carbon:** Carbon arrows are very durable and light weight. There are some concerns with safety when a carbon arrow breaks or shatters. Care should be given to inspect the arrows frequently for damage.

## “Feather vs. Vanes”:

Feathers are more forgiving and will shoot better for beginning archers. Feathers are preferred by most coaches in camp programs. The advantage of vanes (plastic fletching) is their durability, especially in wet conditions. Vanes however, can get shot up while feathers are self-repairing and may last much longer.

**Arrow Length:** Arrows that are too short are dangerous, and arrows that are too long do not fly well. Typically, kids up to 8 years old can use 24” arrows; 8-11, 26 inch arrows, and 11 up 26-32” arrows. Make sure arrows are long enough for all your archers, especially tall ones.

# ARCHERY ACCESSORIES

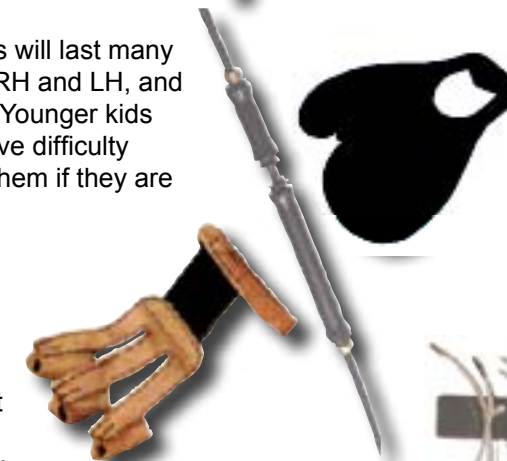
## Arm Guards

It is advisable to buy better arm guards, because they will last much longer. Look for quality brands at pro-shops. The best ones for camps are made with elastic and Velcro® fasteners. Get the smallest ones for small archers, and buy additional full-length armguards for beginners that are having trouble keeping their arms out of the path of the string.



## Finger Protection

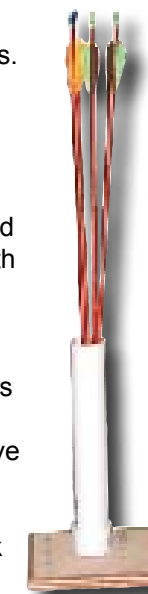
The inexpensive one-piece leather tabs will last many years. These come in sizes XS to XL, RH and LH, and vary in shape with the manufacturers. Younger kids that will only shoot a few times may have difficulty using a tab. They do not need to use them if they are not shooting a lot.



There are several alternatives to finger tabs. The shooting glove fits over the three shooting fingers. Cheaply-made shooting gloves may form a permanent finger groove which may impede a smooth release. There is also a rubber finger guard that slides over the string to make it easier for the kids to hold on with bare fingers.

## Quivers

A quiver is any device used to keep the arrows while shooting. Most camps use ground quivers, some with bow holders for the shooting line. Side quivers that clip on the archers belt or pants also work well, and give the kids a place to carry arrows. on their way back from the target.



## Caring for and Storing Archery Equipment

Proper care and storage of archery equipment during the program season and long-term storage over the winter can greatly increase the lifetime of your equipment.

Hang unstrung bows vertically or horizontally with the strings attached on wooden pegs (dowels).

Arrows and leather goods should be protected from mold by being stored indoors.

# REPAIR AND IMPROVE PROGRAM EQUIPMENT

## Bows

Inspection: Make sure the bows are not cracked, and there are no fiberglass splinters sticking out. Fiberglass splinters can be extremely dangerous and bows must be repaired before being used, or removed from the range and destroyed if not repairable. Cracked wood bows should not be repaired.

To repair a fiberglass splinter, clean the area with isopropyl alcohol. Then apply a good 2-part mix, 24-hour epoxy under and around the splinter. Hold it tight by wrapping it with adhesive tape. Let it dry for 24-hours. Remove the tape, and sand smooth with a very fine sand paper. As a quick fix, heavy tape can be wrapped around the splintered section until permanent repairs can be made.

### Buy Good Bow Strings

Proper strings for your camp bows will greatly improve your archery program. Continuous loop, 12 strand Dacron strings with center servings can be purchased for around 5 dollars. Although a 12 strand string is recommended for heavier bows, they work well for camps. They will last many years if kept clean and waxed, and because they are so thick, they are easy on kids' fingers. The arrows also snap on to the thicker string making it easier and safer for kids to shoot.

Recurve bows should always be strung with a bow stringer. There are many

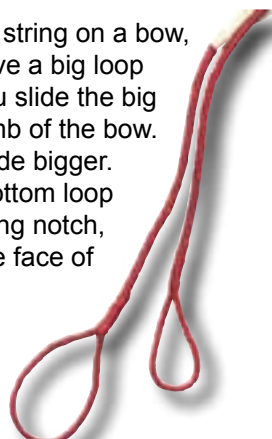


types of bow stringers, including cord, box, or wall stringers. The straight all-fiberglass bows may be strung using the step-through method. The step-through method may damage laminated recurve bows, however. The Push-Pull method is dangerous and should never be used to string or un-string bows.

When putting a new string on a bow, the string should have a big loop and a little loop. You slide the big loop over the top limb of the bow. That is why it is made bigger. Then you put the bottom loop in the lower limb string notch, with the string on the face of the bow.

It is difficult to tell which side is the face on many fiberglass camp bows. Sometimes limbs are so straight; you have to look at the grip to determine which side is the face. It is very common for camps to string bows in the wrong direction. This can be dangerous, because the string may easily slip out of the string notches.

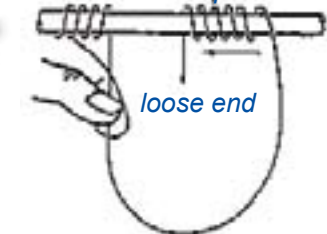
Once a string is put on a bow, it should never be completely removed. The bow is strung and unstrung by sliding the top string loop up and down the upper limb and in to the string notch. You can wrap a rubber band around the string notch and string loop of the lower limb to keep it in place. Store the unstrung bow with the string attached. This procedure will save a great deal of time at the beginning of the next season compared to removing the strings and stuffing them in a can for the mice to make a nest.



## Repairing a Loose Serving

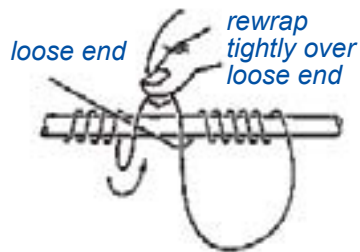
Inspect and discard strings with broken strands. Wax strings that are frayed or fuzzy. You can re-tie a serving that has come loose on one end.

good serving loop 7-8 turns



Unwrap a portion of the loose serving and loop around the bowstring as shown above—make 7-8 turns.

Hold the loose end of the serving with one hand, and rewrap the rest of the serving with the other as shown.



Wrap the serving around the loose end as shown above. Keep the wrapped serving tight around the string.

When all of the turns have been rewrapped, pull the loose end tightly and trim it off with scissors. A drop of glue will help keep the serving in place.

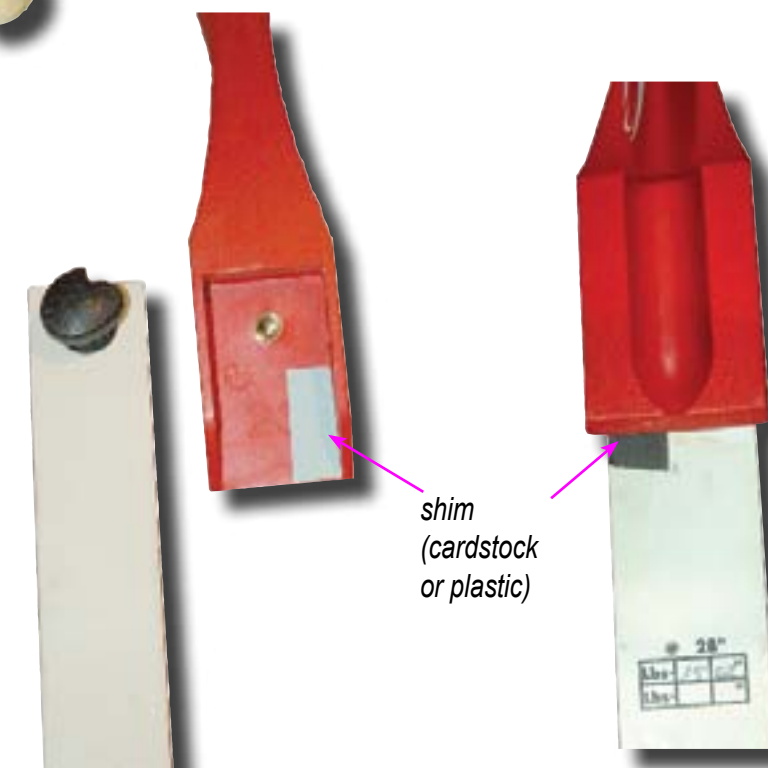


## Twisted Limbs

Check your bows for twisted limbs. The string should lay right down the center of the limb and the bow riser or handle. If the string is off to one side, the limb may be twisted. First set the string back in the center, and draw the bow straight back, and then let it down. If the string moves back to the side of the limb, the limb is twisted.

Watch out for twisted limbs like the one on this all fiberglass camp bow. While a slight twist will not cause a problem, too much twist can cause the string to slip off the bow while at full draw. While this is unlikely to cause an injury, it will scare the archer. You can try to straighten the limbs on an all fiberglass bow by heating the limb in hot water and then straightening it out. It might straighten as it cools.

When a take-down bow limb becomes twisted you can use a simple shim to bring the limb back in line. First unstring the bow and loosen the limb bolt. Shim up the side that the string has moved to. Use one or more pieces of card stock or heavy paper to shim up the limb and then retighten the limb bolt.

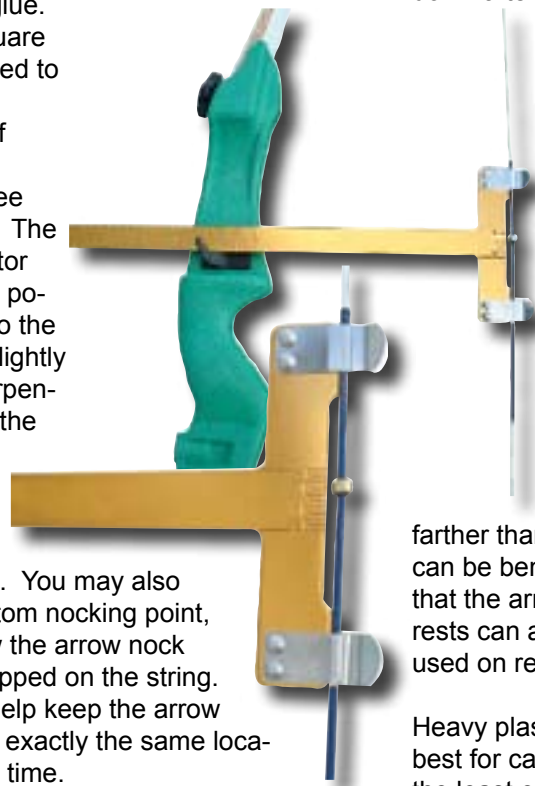




## Nock Locator

Use a nock locator on each bow. If you do not have nock set pliers and metal nock locators, you can tie one on using dental floss or cotton thread and a drop of super glue.

A bow square can be used to locate the position of the nock locator (see page 45). The nock locator should be positioned so the arrow is slightly above perpendicular to the bow string, by about 1/8th inch. You may also use a bottom nocking point, just below the arrow nock when snapped on the string. This will help keep the arrow nocked in exactly the same location every time.



Nock locators will greatly improve the accuracy of the bows and make it easier for the kids to shoot, especially with 3 fingers under the arrow. When an arrow is nocked too low on the string because there is no nock locator, the arrow will fly with the nock end low. This may cause the fletching to cut the archer's bow hand.

Nock locators, bow squares and nock set pliers are inexpensive and can be purchased at any archery shop.

## Arrow Rest

All bows need to have an arrow rest to hold the arrow on the bow. Without an arrow rest, the archers will use their

fingers to support the arrow. This is dangerous, and may cause splinters from the arrow or the fletching to cut the hand. Most fiberglass bows are intended to be shot using the top of the grip for an arrow rest. Many of these wear down after a few summers. A piece of leather can be cut with a hole in the center, and slid over the top of the bow to keep the grip from wearing down.

If the grip is already worn down, you can cut a new shelf with a knife, or stuff a paper clip between the grip and the bow with one wire sticking out. Cut the wire so it does not stick out much farther than the width of the arrow. It can be bent slightly upward to ensure that the arrow remains in place. Arrow rests can also be bought, and should be used on recurve bows.



Heavy plastic hunter arrow rests are best for camp use. These are usually the least expensive, stronger, and hold up well. They also have a big hook to help keep the arrow in place. Many of these are too large for the fiberglass bows. To replace a stick-on arrow rest, it is important to clean the area thoroughly with Isopropyl Alcohol applied with a clean cloth.

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## Bow Sight

A simple adjustable sight can be made with a strip of tape and a large-headed pin. Foam weather stripping also works well for this.

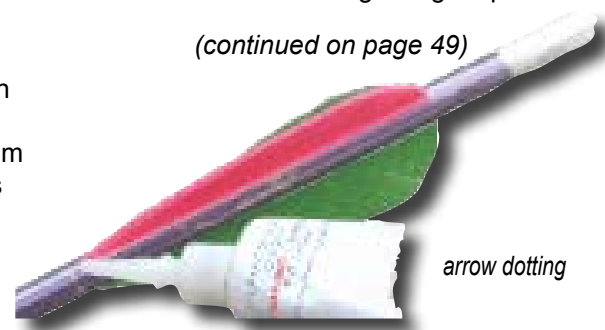
## Arrows

Inspection: Camp arrows are most often made of wood. They should be inspected to make sure they are reasonably straight, have at least 2 feathers, and the nocks are not cracked, broken or loose. Bend the arrows slightly and rotate them to make sure they are not cracked. Cracked or broken arrows should be broken into pieces (so they can't be used) and thrown away. You can also save them to make awards for the kids.

Dot the arrows. Most manufacturers of program equipment do not dot the arrows after fletching them. This is often done by the instructor by putting a drop of glue at the front and back ends of each feather or vane so the glue is on the shaft and the feather. This will keep the fletching on longer.

Nocks can be replaced by cleaning the shaft, putting a drop of glue near the end, and twisting the nock on so the glue is spread everywhere under the nock. Make sure you re-index the nock so the index feather is pointing away from the bow. This can be done by placing the arrow on a table with the index feather sticking straight up.

(continued on page 49)



(continued from page 48)

Then place a thick piece of cardboard or a straw in the nock, perpendicular to the arrow. Turn the nock until the cardboard is parallel to the table. Try to use nocks that will snap on to the string.

You can fix a feather or vane that is starting to come off the shaft by using arrow fletching glue. Put the glue on the fletching or the shaft and hold it together until it dries.

## Mechanical Release



Compound bow archers often use a small device called a "mechanical release." This acts like a trigger, and is attached to the bowstring in a variety of ways depending on the design.

This device is held in the drawing hand and is used to draw the bow. At full draw, the trigger device is slowly squeezed until it activates and releases the bowstring. Never draw and activate the release without an arrow in place, as bow damage may result.

### Points of Inspection

**limb bolt**

**arrowrest**

**limb bolt**

**e-clip**

## Universal Draw-Length Compound Bow

Inspect the bow from time to time and especially after it is dropped or fired without an arrow. Make sure the strings and cables are in good condition. Replace if they are frayed or worn. Check to see that the strings and cables are positioned correctly in the wheel tracks. Check the bow limbs and riser for splinters and cracks. Repair or replace the arrow rest if necessary. Make sure the e-clips are on both sides of the cam axles. Check for dirt or debris in the string grooves on the wheel and cam, and clean as necessary.

You can adjust the weight of the compound bow by turning the limb bolts with the supplied allen wrench. Adjust each limb bolt the same amount, turning clockwise to increase bow weight and counter-clockwise to decrease bow weight. The bow weight will change about 1 1/2 pounds per turn.

## Modified Formats

When there are not enough bows for everyone, or when ground quivers are used, you will have to vary the format slightly. When the archers are sharing bows, divide the archers into groups that will share bows. You'll have to keep the left handed archers separate when using bows that are not reversible.

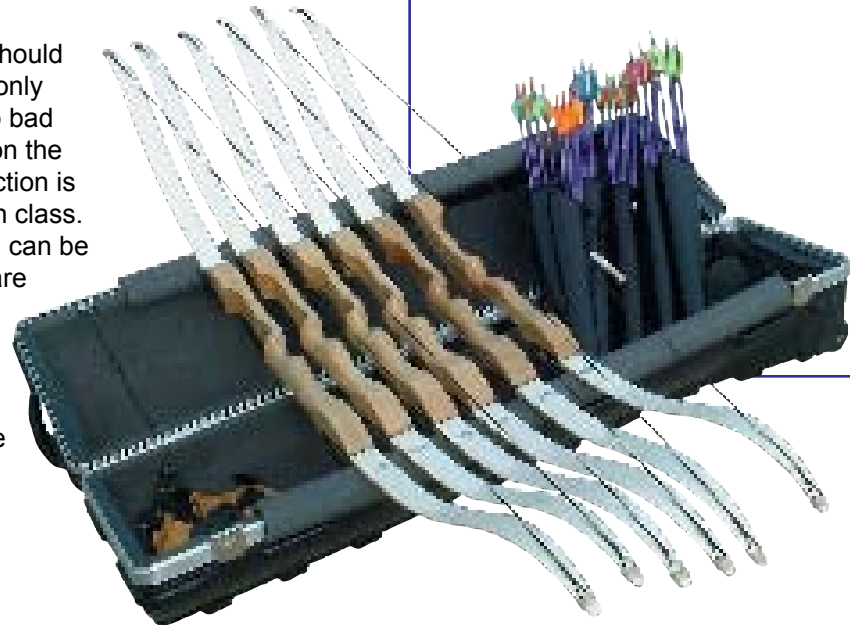
For example, if there are only 6 bows and 15 kids, assign the kids A, B, C, A, B, C, and so on. Place the bow racks between the waiting line and the shooting line or on a stand at the shooting line. When you blow the whistle two times, call the first group – A Line – to come forward, pick up their bow and move to the shooting line. After the A-Line has completed shooting, blow the whistle two times again, bringing the B-Line forward. After all lines have shot, and everyone is behind the waiting line, blow the whistle three times to indicate that it is time to go forward and retrieve the arrows.

If there are not enough arrows for everyone to shoot 3, have the A-Line go forward and pull their arrows then allow the B-Line to shoot next. As you can see, if there is not enough equipment for everyone, then many will be just waiting to shoot. You can have these students practice the drills, or shoot with a stretch band or string loop for practice until it is their turn.

## Fun Shoot

A fun shoot is a very short introduction to the sport of archery. This is used for very large groups, with a limited number of instructors, archery equipment, and time. Set up shooting stations, with a bow and a quiver full of arrows on the shooting line. Set a waiting line about 10 feet back, for the students to line up for their turn to shoot. Make sure the targets are set up close enough that everyone hits the target every time! After a very brief introduction and demonstration, the students can come forward to the shooting line one at a time. The instructors will provide one-on-one instruction so they each have an opportunity to shoot three arrows.

To keep the line moving quickly, the instructors should nock the arrows for the archers. Since they will only shoot a few arrows and not have time to develop bad habits, target faces and balloons can be put up on the target mats. Remember that the goal of this function is for them to have fun and want to join a recreation class. The 1-2-3 Alignment Drill and 1-2-3 Release Drill can be taught to the students waiting their turn so they are better prepared to shoot when they get to the shooting line. This will also keep them involved as they wait to shoot. When all the quivers are empty, the lead instructor will announce that the line is clear, and only the instructors will go to the targets to retrieve the arrows.



## Handling Difficult Students

*If you are having trouble with a student that is not consistently following the rules and procedures, take the following actions in order only if the situation continues.*

*•Remind the entire group of the rule or procedure. You don't need to single out any individual at this time.*

*•Walk up to that individual and remind him of the rule or procedure that is not being observed.*

*•Tell the student he-she will need to follow the rules or they will not be allowed to participate.*

*•Take the arrows from the student's quiver. Tell him to sit down behind the waiting line and watch the rest of the group until he is willing to follow the rules and procedures of the archery range.*

*If you take these actions, it's unlikely you will have significant discipline problems.*

## Standard Archery Range Rules

1. Know and obey all range commands
2. Keep your arrows in your quiver until you are told to shoot.
3. Always wear your arm guard and finger tab.
4. Only use the arrows the instructor gave you. Remember what they look like.
5. Always keep your arrows pointed down or towards the target. Shoot only at your target.
6. If you drop an arrow, leave it on the ground until you are told to get your arrows.
7. Always walk at the archery range.

## Archery Range Whistle Commands

Two Blasts — “Archers to the shooting line.”

One Blast — “Begin shooting.”

Three Blasts — “Walk forward and get your arrows.”

Five or More Blasts (series of blasts) — “STOP SHOOTING Immediately and put your arrows in your quiver.”

## Archery Range Procedures

Stand behind the waiting line until you hear 2 whistles or “Archers to the shooting line.” Pick up your bow and straddle the shooting line.

Keep your arrows in your quiver until you hear 1 whistle or “Begin shooting.”

After you have shot all your arrows, step back from the shooting line, set your bow on the rack, and wait behind the waiting line.

After everyone is done shooting and behind the waiting line, the instructor will blow the whistle 3 times. “Walk forward to get your arrows...Stop at the target line.”

## Pulling Your Arrows

- Two archers at a time, from each target, may go forward from the target line to pull their arrows.
- Stand to the side of the target and make sure that no one is standing behind your arrows.
- Pull your arrows out one at a time, and put them in your quiver.
- After you have pulled all of your arrows, return to the waiting line.

# Archery Instructor Training

## ARCHERY INSTRUCTOR TRAINING



Thousands of new archery instructors are trained and certified each year on behalf of USA Archery and the National Field Archery Association. As a result, each year millions of young people will gain from the training and experience of their certified instructors.

Now that you've become a certified archery instructor, contact these organizations to get involved with local clubs and archery programs.

Teaching archery is fun and rewarding. By following your training, you'll have just as much fun with the sport as your participants.

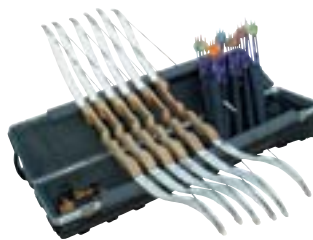
Both archery organizations have advanced coaching training available once an Intermediate course has been successfully attended. Check out their websites for additional information:

[www.usarchery.org](http://www.usarchery.org)  
[www.fieldarchery.org](http://www.fieldarchery.org)



USA Archery provides instructor facilitation services for both USA Archery and the NFAA.

USA Archery also provides loaner training equipment for certification courses, rental equipment for short-term programs and complete archery kits for sale.



*to schedule courses or order materials:*



**USA Archery**  
24880 NW 16th Ave  
P.O. Box 249  
Newberry, FL 32669  
(352) 472-2388 phone  
(352) 472-2375 fax  
[info@usarchery.org](mailto:info@usarchery.org)

## INTERMEDIATE CERTIFICATION

As a certified Basic instructor, you can increase your teaching skills and knowledge by taking the Intermediate Certification for archery instructors.

You'll learn intermediate instructor skills, how to repair equipment, how to run a successful longer-term archery program, and how to teach a Basic Certification course.

You'll also learn how to teach the entire range of Drills & Skills

Whether your archers continue on to shoot recurve bows or compound bows, you'll be ready to lead the way and get them shooting correctly.

Visit [www.teacharchery.org](http://www.teacharchery.org) or [www.usarchery.org](http://www.usarchery.org) for details and schedules.

The Intermediate Certification is recognized by both USA Archery and the National Field Archery Association, and is facilitated by USA Archery.

