Hunter Development Program Workshop Lesson Guide

Workshop Title:

Archery

Workshop Objective:

Participants will demonstrate basic knowledge of types of bows and arrows, safely handle and fire a bow and learn routine bow maintenance.

Topic	Time	Technical Information to cover	Suggested Activities
Types of bows	5 min	Types of archery equipment used	Examples of equipment used
Archery Safety	3 min	Safe bow handling; Dry fire	Explain importance of bow safety, dry fire rule
Parts of the Bow	5 min	Parts of the bow/Parts of the arrow	Explain common parts of the bow (rest, grip, stabilizer, sights, release) and arrow (fletchings, arrow head, nock).
How the Bow is used	5 min	Types of bows/arrow heads used for hunting	How is archery used for hunting and the shooting sports
How to Shoot	10 min	Shooting form	Demonstrate correctly modeled form
Bow fit/Arrow selection	2 min	How bows are fitted to individual shooters	Discuss draw length measurements and spine
Bow hunting ethics	5 min	Vital areas	Using 3-D cutout or photographs, explain vital areas on deer and other game animals
	25 min	Live fire	Use 3-D or block target(s) at 7-10 yards; 3-D cutout deer with vital areas can be used to explain shot placement on broadside, quartering animals

HE Field Day Manual : Archery

1. Introduction
2. Safe Handling and Operation
    - Archery Safety
    - Parts of the Bow
    - Sights
    - Types of Bows
    - Arrows and Arrowheads
3. Archery Techniques
    - Eye Dominance
    - The 11 Steps to Archery Success
    - String Bow
    - Backstops and Other Precautions
4. Hunting Application
    - Vital Areas
    - Understand the Range of your Bow
5. Live Fire

Class Time: 2 hours

Range Time: 1 hour/ 5-10 shots per student

1. Introduction

A. Opening Statement
B. Introduction of Instructors
C. Purpose of the Course – to provide instruction to new shooters on how to safely and correctly handle archery equipment at home, on the range, and in the field.

2. Safe Handling and Operation

A. Archery Safety – Discuss the 10 rules of firearm safety and provide examples for new shooters. Also explain about dry firing a bow: when a bow is at full draw, energy is stored in the limbs and transfers this energy to the arrow through the string upon release. A dry fire occurs when an arrow is not on the string when the bow is release; this can damage and even break the limbs of a bow, and harm both the shooter and those near them. ONLY RELEASE A DRAWN BOW WHEN THERE IS AN ARROW ON THE STRING.

1. Always point the bow in a safe direction.
2. Only knock an arrow when it's safe to shoot.
3. Be sure of your target and what is in front of and beyond it.
4. Never shoot over a ridge.
5. Make sure your bow is safe to operate by inspecting it before use.

6. Never dry fire a bow, as this can damage the bow and yourself or others.
7. Never shoot an arrow straight up in the air.
8. Unload firearms when not in use
9. Handle arrows carefully and keep the points in a covered quiver.
10. Avoid alcohol, prescription, over-the-counter, and other drugs before and during shooting.

B. Parts of the Bow – Point out and explain the parts of the bow so that new shooters will be familiar with the location and terminology of the part. Parts to include are:

1. Riser
2. Sight and Sight Window
3. Upper and Lower Limbs
4. Wheel and Cam
5. Cable Guard and Slide
6. Bow String
7. Bow Cable
8. Arrow Rest
9. Grip
10. Limb Bolts
11. Center Serving
12. Nocking Point
13. String Silencers

C. Archery Sights – Explain and point out the different kinds of sights and their differences, as well as how to adjust and aim with each.

1. Instinctive (No sights)
2. Sight Pins
3. Peep Sight

4. Telescopic Sights (Crossbows) – Explain eye relief and "scope bite"

D. Types of Bows – Explain the differences between the types of bows and how they operate.

6. Longbow
7. Recurve Bow
8. Compound Bow
9. Crossbow

E. Arrows and Arrowheads – Point out and explain the parts of an arrow, and explain the different kinds of arrowheads that are used for hunting purposes.

1. Parts of an Arrow

a. Arrowhead/ Point
b. Shaft
c. Crest – Be sure to explain the purpose of the numbers listed in the crest, and explain the importance of spine stiffness and the archer's paradox.
d. Fletching/Veins/Feathers
e. Nock

2. Types of Arrowheads – While there are many different kinds of arrowheads, each is designed for a specific purpose and it is important to match the arrowhead to the activity you are pursuing. Be sure to discuss the importance of carrying arrows correctly, especially arrows with broadheads, both by hand and with the use of a quiver.

a. Target, Bullet, and Field Points – intended for target shooting only.

b. Judo Points – designed for "stump shooting."

c. Blunt Points – designed for hunting small game, such as rabbit and squirrel.

d. Bowfishing Points – designed to pierce the hard scales of gar, carp, and similar species of rough fish.

e. Broadheads – designed for hunting big game animals.

1. Fixed Blades

2. Removable Blades

3. Mechanical or Expandable Blades

3. Archery Techniques

A. Eye Dominance – Explain the importance of aligning the sights of the bow with the dominant eye. If students do not know which eye is dominant, help them to determine if they are right or left eyed dominant. Also explain the importance of shooting with both eyes open.

It is important that shooters know which of their eyes is strongest (dominant) because this will determine how they will perceive the target. The arrow should always be anchored on the same side as the dominant eye.

To help students determine eye dominance, have them stand two to three yards away from you, with their shoulders and toes pointed toward you, their arms down by their sides (hands out of pockets). Instruct the students to raise their right arm and point at your nose

with their index finger, with both eyes open, then slowly drop the right arm point again at your nose with the left index finger. Regardless of which arm is raised, their index finger should align under their dominant eye. While there are many methods for determining eye dominance, this method is a quick and simple way to easily see what eye the shooter is using.

You may run across shooters who are cross dominant (dominant eye and hand are not on the same side of the body). In these instances, inform the student that it is always easier to change hands rather than the dominant eye. If shooting with their non-dominant hand proves to be too difficult, use of an occluding device may be needed.

A very small percentage of shooters may be co-dominant (finger lines up over the bridge of the nose in between the eyes). In these cases, it is up to the shooter to choose which side they want to shoot from.

Explain to students the benefits of shooting with both eyes open:

1. Depth Perception – especially important when shooting moving targets.

2. Balance – closing one eye confuses the brain, making it think the body is standing lopsided, which causes unconscious corrections by the brain, further complicating the problem.

3. Safety – with both eyes open, a shooter will still have use of their peripheral vision on their off side, allowing them to spot potential safety hazards (someone approaching down range from the off side).

B. <u>The 11 Steps to Archery Success</u> – no matter what kind of bow an archer chooses to use or what activity they participate in, the 11

Steps to Success will allow them to practice in a way that promotes consistency and correct shooting technique.

1. Stance – start with the bow side (left side for right handed shooters, right side for left handed shooters) pointing toward the target. With both feet together, slide the front foot back half a step, and then step out to shoulder width apart. Turn the front foot so that it points toward the target comfortably; this is called an open stance.

2. Nock – there are several ways to nock an arrow to the bowstring; it is important that archers know how to do this safely, whether they are in a tree stand or at an archery range. However they nock the arrow, it is important that they arrowhead is always pointed in a safe direction (not at the archer's body, or at another person).

3. Draw Hand Set – This is the step where the drawing hand is placed on the bow string (but no tension is applied yet). If shooting with the hand, most archers use either a split finger draw (one finger above, two under the nock) or an apache draw (all three fingers under the nock). With either style, archer's should place the bow string on the "archer's groove": this can be found by holding the first three fingers of the drawing hand close together and, using a marker, draw a line across the first joint of the first finger, straight across the second finger (behind the first joint) and the third finger (close to the first joint). If using a mechanical release, attach it to the bowstring and get the device set in the drawing hand.

4. Bow Hand Set – The hand that is holding the bow should be placed on the grip so that the life line (large, curving line in the palm closest to the thumb) is over the center of the grip (if there is a seam on the grip,

remember life line on the line). This hand placement should have the outside knuckles of the hand at approximately a forty degree angle; if the knuckles are vertically straight when gripping the bow, the likelihood of over gripping (holding the bow too tightly) and of the bow string scraping the forearm upon release is increased. The bow should not be held so tightly that the fingertips turn a different color.

5. Pre-Draw – This is a very important step for maintaining proper archery technique, but is often skipped in haste to make a shot. No tension should be on the bowstring thus far (it should still be in a resting position, with the draw hand on the string). Lift both the draw hand and the bow hand together so that they are on level with the target; this will help the shoulder and core muscles in drawing and holding tension on the bow in the following steps. Drawing while moving the hands to the target causes the muscles to get out of sync, causing unnecessary fatigue when the bow is drawn and held.

6. Draw – Using the shoulder muscles, draw the bow back so that the nock of the arrow is near the shooter's cheek. The movement should be like a big shrug of the shoulder; remember, it is the shoulder and core muscles that draw and hold the tension of the bow, not the muscles in the arms.

7. Anchor – If shooting with the hand, a shooter should anchor at the corner of the mouth, with the tip of their index finger literally touching their lips. If using a mechanical release, the anchor point will be closer to the shooter's ear due to the extra length of the device (but the arrow will still be near the corner of the shooter's mouth). The importance of the anchor is that it should be easy to find shot after shot; consistency is the key to

success in any shooting sport, and so it is vital to anchor in the same spot every time.

8. Aim – Whether shooting with sights or without, acquire the sight picture of the target as is necessary.

9. Shot Set-Up – This is another important step that is often skipped, but can significantly improve an archer's accuracy and consistency. Maintain the sight picture from Step 8 while squeezing the shoulder blades together (imagine trying to hold a pencil vertically between the shoulder blades). This added tension prepares the shoulder and core muscles for a quicker, smoother release.

10. Release – This step should be smooth and fluid to get the arrow off of the string with minimal added vibration. If shooting with the hand, keep the back of the hand straight while tension is on the bow string; when ready to release, relax the back of the hand and let the fingers slide across the cheek (performing Step 9 significantly helps with this release). Just releasing the string with the fingers while still at anchor, called plucking, adds extra vibration to the bow string because each finger is a different length and each hits the bow string at a different time during the release. If using a mechanical release, Step 9 should still be implemented and the Draw Hand should still slide back toward the shoulder upon release.

11. Follow Through and Reflect – Follow through on each shot by allowing the fingers to slide across the cheek and the Draw Hand to slide back toward the shoulder. This method helps to get the fingers/ release away from the string in the smoothest and quickest fashion. Reflect by observing where the arrow hit the target, how the shot "felt," and if the Draw Hand stopped

near or over the shoulder to see if follow through was performed. Make the mental corrections needed for the next shot, take a breath, and return o Step 2 (once stance is set, the feet should not move again until shooting is finished).

C. Sight In Procedure – Where applicable, explain the procedure for zeroing the sights on a bow. This process is similar to sighting a rifle, taking three or more shots to determine where the arrows are striking the target when aiming for the center, and then making the necessary adjustments so that arrows are consistently grouping in the center. Poor archery technique can complicate this process, as a bow cannot be zeroed using a bench rest as with rifles.

D. Backstops and Other Precautions – Remind students of safety rule #3 (Be sure of your target, and what is in front of and beyond it) as well as rule #7 (never shoot an arrow straight into the air). Remind them to always use a safe backstop and to shoot in a safe direction where no one or nothing will be accidently hit. Caution should be taken when archer's use a "sky draw" – raising the bow over the shoulders and pulling down on the bow string to reach full draw, pointing the arrow into the air and often over the horizon – as the arrow's point will be high over target and should an accidental release occur, someone or something maybe be hit. It is recommended that archer's only use a bow with a reasonable draw weight that does not require the use of a sky draw to reach full draw; if a bow's draw weight is too high for an individual, they should use a bow with a lighter draw weight and build up the muscles used in archery (shoulders and core) before returning to the bow with a higher weight.

4. Hunting Application

A. Vital Areas – It is the responsibility of every hunter to make a clean and ethical harvest of a game animal. Explain to participants that to make ethical shots requires practice before any hunting season begins and that they should be able to consistently shoot tight groups with the arrows and broadheads they plan to use for the particular game they will be pursuing. Explain that they should also be familiar with the game they will be hunting and the location of vital areas on the animal so that they know where to aim to make an ethical harvest.

B. Understand the Range of Your Bow and Determining Distance – Explain to students that the average distance of a bow hunting shot in Georgia is 40 yards or less; taking shots at distances greater than this are unlikely, but also increase the chance of missing vital areas and wounding game. It is every hunter's responsibility to only take shots that are within the range of their particular skill level and to make ethical decisions about whether a game animal is too far away to safely and ethically take a shot. Use of a range finding device can be employed to reduce the chances of shooting at a game animal that is too far away, either by determining the distance from a hunting blind or stand to landmarks and making note of them before the season starts so a hunter will know when an animal is in range, or by having the device on one's person while hunting. Hunters can also practice estimating distances so that a range finding device is not necessary to determine in an animal is within range. It is important to note that arrows travel in arcs, not straight lines, so precautions should be taken when using a range finder and making shots in wooded areas; be sure the

appropriate setting is used on the range finding device when determine distances in these situations.

5. Live Fire

The live fire portion of this Family Day at the Range Lesson plan should incorporate the following guidelines:

A. To give new shooters the best chance for success, start with targets between 5-7 yards away from the shooting line; focus on correct technique and skill development, distances can increase once these have been strengthened in new shooters.

B. If providing bows for new shooters to use for a live fire class, provide bows that have draw weights less than 20lbs.; this will make shooting a bow for a new shooter much more enjoyable and allow them the chance to shoot a bow that they can reasonably handle. A good bow to use would be the Mathews Genesis, a bow made popular by the National Archery in the Schools Program, that has and adjustable draw weight and universal draw length.

C. Start participants off with blank targets (no scoring ring visible). This will help new shooters focus on proper technique and not be focused or discouraged by scores. Once skill has increased, using the scoring face of a target, or, using tape, drawing tic-tac-to hash marks on the target will allow participants the opportunity to work on precision and accuracy.

D. If time and resources allow, provide the opportunity for participants to shoot 3D targets, or similar targets that depict game animals, to simulate bow hunting conditions.

E. If time and resources allow, place targets or other safe objects on the range and let participants guess the distance to the them, simulating estimating range while in the field.

F. Provide targets that are NOT in the shape of people, including "tombstone" and "zombie" targets; the focus of the Family Day at the Range Program is on imparting safe and accurate shooting skills and knowledge to new shooters, not self-defense or video game type shooting; there is no reason to provide targets that resemble people. Bull's eye and game animal targets are acceptable.

Hunter Development Program Workshop Lesson Guide

Workshop Title:

Treestand Safety

Workshop Objective:

Participants will demonstrate the ability to use safe and proper procedures when climbing up, hunting from and climbing down from an elevated stand.

Topic	Time	Technical Information to cover	Suggested Activities
Types of elevated stands	5 min	4 types of stands: hang-on, climbing, ladder, tower.	Show the different stand and how they attach to trees.
Fall Arrest Systems	10 min	Components of FAS: full body harness, lineman style belt, tree strap, tether, suspension relief strap.	Demonstration with the different components and how each works.
If You Fall	10 min	4 things you need to remember if you do fall: don't panic, signal for help, climb back on platform, avoid suspension trauma.	Group discussion. Talk about suspension trauma.
Additional Tree Stand Equipment	5 min	Unload firearm, put arrows in quiver, use haul line, once secure in stand haul equipment. Using a Lifeline and Q-Safe Strap.	Demonstrate and discuss.
Stand Safety	30 min	Purchase commercial stands. Attach FAS to the tree while at ground level and stay attached, use 3 points of contact, check stand carefully prior to use, don't exceed weight limit, don't climb with anything in hands.	Demonstrate and discuss.

HE Field Day Manual : Tree Stand

1. Introduction
2. Tree Stand Safety
    - Types of Stands
    - Stand Selection
    - Stand Inspection
    - Stand Installation
    - Practice
3. Fall Arrest Systems
    - Parts of FAS
    - FAS Selection
    - Inspection and Maintenance
4. If You Fall
    - Self-Recovery
    - Rescue Plan
    - Suspension Trauma
    - Practice
5. Additional Tree Stand Equipment
6. Skill Development Activity

Class Time: 1 hour

1. Introduction

D. Opening Statement
E. Introduction of Instructors
F. Purpose of the Course – to provide instruction and practice for workshop participants to develop the ability to install and use tree stands in the field while hunting.

2. Tree Stand Safety

A. Types of Elevated Stands

1. Fixed/Hang-on
2. Climbing
3. Ladder
4. Tower

B. Stand Selection – Only purchase and use tree stands that meet or exceed TMA standards. Be aware of the weight limitations of the stand that you plan to purchase and use. Never alter, modify or substitute any component of the stand or climbing system. Select the proper climbing aids to complete your selection.

C. Stand Inspection – Inspect your tree stand and all safety devices before each use.

D. Stand Installation – Always read, understand and follow the manufacturer's warnings and instructions. Review any video

instructions. Maintain all instructions and pass them on to anyone that borrows your stand. Select a tree that is straight and healthy for installation. Never install a tree stand on a utility pole.

E. Practice – Prior to putting your stand to use during a hunting season, practice installing and using your stand at ground level. It is also advisable to practice installing and using your stand in low-light conditions while wearing the type of clothing that you will wear while hunting. Always remember to keep three points of contact when climbing.

3. Fall Arrest Systems (FAS)

A. Components of a FAS –A commercially manufactured tree stand will include written and video instructions for use as well as a fall full body harness/fall arrest system. Due to the fact that the FAS included with your purchase is designed to be adjustable to fit a wide range of hunters, it is advisable to purchase an after-market FAS in a style and size that best fits the hunter's needs. A complete FAS will be made up of :

1. Harness including shoulder, chest, waist, leg straps and tether
2. Tree strap
3. Climbing/lineman's belt
4. Suspension relief strap

B. FAS Selection– There are many manufacturers of FASs. Only select a FAS that meets or exceeds TMA standards and is within the weight range suggested for its intended wearer. The harness should allow for adjustability to fit the hunter snuggly.

C. Inspection and Maintenance- Inspect your FAS prior to each use for signs of wear and/or chaffing. Check the expiration date on your equipment. Discard and replace any equipment that is out of date or has experienced a fall.

4. If You Fall

A. Self-Recovery – If you fall from a tree stand and are properly using a FAS, you should only fall a few inches. In the event of a fall, remain calm and try your best to get back into the stand safely.

B. Rescue Plan - Be prepared ahead of time by informing family, friends and your hunting buddy where you intend to hunt, the location of your stands and when you plan to return from hunting. Also pack communications/ signaling devices such as two-way radios, cell phones, personal locator beacons, flashlight, signal flares and a whistle. If you are unable to recover to the stand, remain calm and begin efforts to communicate your situation. Make sure that you can access all your communication devices.

C. Suspension Trauma – While you are waiting to be rescued, you may experience suspension trauma while hanging in your FAS. This is caused by blood pooling in your legs and preventing a sufficient amount of oxygen reaching your brain, causing you to become unconscious. Try to prevent suspension trauma by relieving pressure on your legs by moving them, also follow the manufacturer's directions to use the suspension relief strap.

D. Practice- No one escape/rescue plan will work for every hunter or every circumstance. Only you can determine the best plan for your situation. It is advisable to develop a plan and practice

recovery and rescue at ground level in the presence of a responsible adult.

5. Additional Tree Stand Equipment

1. Haul Lines- Use haul lines to transport equipment, unloaded firearms and packs into stands. Never climb into a stand and try to transport equipment at the same time.
2. Lifelines- Using a Lifeline is an excellent way to remain attached to the tree while climbing into a hand-on or ladder stand.
3. Q-Safe Strap- The Q-Safe Strap takes the place of the tree strap and gives those hunters that are using a climbing stand a tool that allows them to easily adjust the height of the tree strap as the move up and down the tree.

6. Skill Development Activity