

ALASKA DEPARTMENT OF FISH AND GAME  
HUNTER INFORMATION AND TRAINING



**TODAY'S BOWHUNTER  
TEACHING GUIDE**

October 2015



## ***“Principles of Learning Methods”***

### **Students Remember:**

**10% of what they READ**

**20% of what they HEAR**

**30% of what they SEE**

**50% of what they HEAR and SEE**

**70% of what they SAY**

**90% of what they SAY and DO**

### **CHAPTER ONE: INTRODUCTION TO BOWHUNTING**

- Modern Bowhunting
- Bowhunting and Its Benefits
- Challenges of Hunting with Bow and Arrow
- How Bowhunter Education is Funded

### **CHAPTER TWO: WILDLIFE CONSERVATION**

- Wildlife Conservation: Lessons, Habitat Mgmt, Carrying Capacity, Hunter’s Role
- Wildlife Mgmt and Conservation Principles
- Wildlife Management Practices
- Wildlife Identification

### **CHAPTER THREE: SAFE AND RESPONSIBLE BOWHUNTING**

- Archery and Bowhunting Safety
- A Responsible Bowhunter: Regulations, Ethics
- Bowhunting Responsibilities: Respect Personal Limitations, Equipment
- Landowner, Game Animals and Resources, Hunting Companions, Nonhunters
- Bowhunting’s Public Image: Positive Actions

### **CHAPTER FOUR: KNOW YOUR BOW AND ARROW**

- Introduction to Bows: Types, Parts, Characteristics
- Matching Your Bow with Your Abilities
- The Arrow: Parts, Shafts
- Matching Arrow with Your Bow:
- Spine, Archer’s Paradox, Arrow Length
- Fletching: Purpose, Types
- The Nock: Nocking Point
- Arrow Points: Types and Their Uses
- Broadheads: Types and Their Characteristics
- Accessories: Essential Items, Optional Items

## **CHAPTER FIVE: PREPARATION BEFORE THE HUNT**

- The Well-Dressed Bowhunter: Staying Warm, Staying Dry, Invisible Bowhunter
- Preparation Means Practice: Bow-Shooting Errors, Sighting In, Tuning,
- Advanced Archery Practice, Judging Distances
- Preparing to Hunt: Study Your Quarry, Scout the Hunting Area

## **CHAPTER SIX: ELEVATED STANDS & OTHER BOWHUNTING TECHNIQUES**

- Still Hunting, Stalking and Glassing
- Blinds: Ground Blind, Pit Blind
- Elevated Stands: Advantages and Disadvantages, Types
- Tree Stand Safety: Recommendations, Inspecting, Selecting Location, Fall-Restraint Devices, Hauling Equipment Into Stand
- Using Scents and Lures: Cover Scents, Attractants, Whitetail Tips
- Using Game Calls
- Bowfishing

## **CHAPTER SEVEN: SHOT PLACEMENT & RECOVERY TECHNIQUES**

- Shot Impact: Broadheads
- Shot Placement: Chest and Abdominal Cavities, Outside Main Cavities, Spine, Primary Aiming Zone
- Shot Strategy: Proper Shot Angle, Location
- Setting Up Perfect Shot: Right Moment, Why Shots Go Wrong
- Big Game Recovery: Clues, When to Begin, Trailing, Blood Sign, Lost Sign
- Approaching Downed Game
- Field Dressing: Basic Procedure, Moving Big Game

## **CHAPTER EIGHT: OUTDOOR PREPAREDNESS**

- Importance of Planning and Preparation: Hunting Plan, Hazards, Gear, Discussion with Companions
- Basic First Aid: Bleeding, Arrow Wounds, Broken Bones, Falls
- Survival Kit
- Topographic Map and Compasses: Orienteering Compass, Declination, Plotting Progress
- If You Get Lost: STOP, Shelter, Fire, Signaling, Water, Food
- Hypothermia
- Heat Exhaustion and Heat Stroke

## **WRITTEN TEST**

## **FIELD SECTION – Proficiency Shoot/Blood Trailing Exercise**

## CHAPTER ONE

### *Introduction to Bowhunting* (Approximate Time: 45 minutes)

#### Chapter Objectives:

- Identify several people who contributed significantly to modern bowhunting and describe their contributions.
- List two special challenges that set bowhunting apart from hunting with modern firearms.
- Define bowhunting and list two benefits.
- State the purpose of bowhunter education and list two benefits.
- Name two funding sources for hunter and bowhunter education.
- State two reasons why they bowhunt or would like to bowhunt.

#### Materials:

1. Instructor Notebook
2. IBEP manual for each student
3. Bows & Arrows to display (if available)
4. Charts and deer or bear diagrams
5. Easel pads of paper, chalk or dry erase board
6. Flipcharts
7. T.V., VCR Player, Overhead Projector
8. Marking pens
9. Heavy paper “tents” for student name cards

#### PRE-CLASS PREPARATION

- Have students create name card tents to place in front of them.
- Have students complete registration (sign-in sheet).

**NOTE:** Teaching is most effective when you can engage students. To help you involve your students as you present information, we’ve suggested several questions in italics throughout the lesson plans.

#### INTRODUCTION AND ICEBREAKER

- *Ask the class “Why do you bowhunt?” and write their answers on a dry erase board or flip chart.*
- Most bowhunters (about 60 percent) are attracted by the challenge.
- The purpose of the course is to help people meet the challenges of bowhunting safely and successfully.

#### SHOW “INTRO TO BOWHUNTING” VIDEO (30 minutes)

## MODERN BOWHUNTING

- Today's bowhunters benefit from more than a century of research and innovation.
- Pioneers include:
  - "Fathers of Bowhunting" – Dr. Saxton Pope and Arthur Young (early 1900s).
  - Doug Easton – aluminum arrows (1940s).
  - Howard Hill – showman and master archer (1950s).
  - Fred Bear, Ben Pearson and Earl Hoyt – developed equipment and furthered education (1950s-1970s).
  - Holless Allen and Tom Jennings – compound bow (1966).

## BOWHUNTING AND ITS BENEFITS

- Bowhunting – the act of pursuing or taking wild game animals using a bow and arrow.
- *Ask the class to name the benefits of bowhunting. (TQ2)*
  - Wildlife Management
  - Recreational
  - Economic
  - Educational
  - Cultural
  - Social Therapeutic
  - Health

## CHALLENGES OF HUNTING WITH BOW AND ARROW

- *There are three special challenges that set bowhunting apart from gun hunting. What are they? Write the answers on a dry erase board or flip chart (TQ1)*
  - Archery skills; distance judging is more critical.
  - Must shoot from closer range.
  - Must be more proficient at tracking and finding game.

## HOW BOWHUNTER EDUCATION IS FUNDED

- Funding for bowhunter education comes from several sources:
  - Federal Funds (Pittman-Robertson)
  - State and Provincial/Territorial Funds
  - Organizations
  - Membership Fees and Donations

## CHAPTER TWO

### *Wildlife Conservation (approximate time 1/2 hour)*

#### **Chapter Objectives:**

- Define wildlife conservation and how it differs from preservation.
- List the five essential elements for wildlife habitat.
- Define carrying capacity.
- List the factors that limit wildlife populations.
- Explain the role of hunting in wildlife conservation.
- Give five examples of wildlife management practices and explain how each helps conserve wildlife populations.
- List the five groups commonly used to divide wildlife.
- Explain why the correct identification of wildlife is crucial for hunting.
- Give one example of a large mammal and some of its distinguishing features.
- Tell where to find more information on identifying characteristics, habitat and range of common wildlife species.

**MATERIALS:** No additional materials.

#### **WILDLIFE CONSERVATION (TQ3)**

- The concept of wildlife conservation has been around since ancient times.
  - The Bible
  - Kublai Kahn
- Goal: To ensure the wise use and management of renewable resources.
- Preservation: Another means of protecting or saving a resource.

#### **Lessons in Wildlife Management**

- Initially, wildlife management in the United States was skewed toward protection.
- The Kaibab Plateau – overpopulation of mule deer.
  - Opened to hunting in 1929.
  - Healthy mule deer population today.
- Similar occurrence in Pennsylvania – restricted hunting leads to overpopulation.

#### **Habitat Management (TQ4)**

- *What's the most critical aspect of wildlife conservation?*
  - Wildlife habitat
- Five essential elements must be present to provide a viable habitat (discuss each):
  - Food
  - Water
  - Cover
  - Space
  - Proper Arrangement

## Carrying Capacity (TQ5 & 6)

- Carrying capacity: The number of animals the habitat can support year-round.
- *What are the factors that limit population?*
  - Starvation
  - Severe weather (especially in Alaska)
  - Hunting
  - Accidents
  - Predators
  - Loss of Habitat (contributed the most in the reduction or loss of wildlife populations)
  - Disease
- If the conditions are balanced, game animals will produce a surplus.

## The Hunter's Role in Wildlife Conservation

- *How do hunters play a role in wildlife conservation?*
  - Help control wildlife populations.
    - Keep population in balance with habitat.
    - Regulated hunting has never endangered wildlife populations.
  - Provide information from the field that helps wildlife managers.
  - Funding from hunting licenses.
    - Help both game and non-game species.
    - Revived dwindling or endangered species.

## WILDLIFE MANAGEMENT & CONSERVATION PRINCIPLES (TQ 8)

- The wildlife manager's job:
  - Maintain populations below carrying capacity — keep population in balance with habitat.
  - Monitor breeding stock – ensure the correct mix of adult and young animals.
- Managers must consider:
  - Historical trends
  - Current habitat conditions
  - Breeding population levels
  - Long-term projections
  - Breeding success

## Wildlife Management Practices

- Monitoring wildlife populations: Birth rate and death rate.
  - Provides data needed to set hunting regulations.
- Habitat improvement: Curbing succession (natural progression of vegetation).
- Hunting Regulations: Protect habitat and preserve animal populations.
  - Seasonal time limits
  - Bag limits
  - Legal hunting methods



### **Wildlife Management Practices (continued)**

- Hunting
- Predator control
- Artificial stocking
- Controlling or preventing disease and its spread
- Management funds/programs

### **WILDLIFE IDENTIFICATION (TQ7 & 12)**

- *Why is the development of wildlife identification skills a basic requirement for hunters?*
  - Mistakes can lead to illegal harvest of game or non-game animals.
  - Identifying animals accurately can be a challenge.
  - Some species are protected from hunting.
  - In some animals both sexes have antlers such as caribou.
- *Ask the class to help you develop a list of the most popular game animals hunted in your area. Using your dry erase board or flip chart, write down the key characteristics of each animal.*

## CHAPTER THREE

### *Safe and Responsible Bowhunting* (Approximate Time: 1 hour)

#### **Chapter Objectives:**

- List four archery or bowhunting safety rules.
- Define bowhunter responsibility.
- List at least five words that describe a responsible bowhunter.
- Define the “rule of first blood.”
- Give three reasons for bowhunting laws and regulations and describe how they are passed.
- Look up the following hunting regulations in your area:
  - Legal bowhunting seasons.
  - Legal methods and equipment for bowhunters such as required bow weight or broadhead regulations.
  - Special provisions for bowhunter with disabilities – See regulations
  - Tagging requirements.
- Explain what is meant by the “unwritten law” of bowhunting.
- Give two examples of bowhunting responsibilities for each one of the following: your personal limitations, your equipment, the landowner, the resource and animals, your hunting companions and nonhunters.
- Explain hunter behaviors that lead to negative perceptions and anti-hunting sentiment.
- List three hunter actions that promote a positive public image.

**MATERIALS:** Everyone needs a copy of the current Alaska hunting regulations.

#### **ARCHERY AND BOWHUNTING SAFETY**

- *What should be your number one priority when you use a bow and arrow?*  
-Safety

#### **Archery Safety (TQ9 & 23)**

- In many states, a bow and arrow are considered a firearm, and the same rules and regulations apply.
- Point out six key rules:
  - Never Dry fire a bow.
  - Only point the bow and arrow in a safe direction.
  - Only nock an arrow when it’s safe to shoot.
  - Be sure of your target and what is in front of it, immediately behind and beyond.
  - Never shoot over a ridge.
  - Only shoot when you have a safe range or shooting area, and a safe backstop

## **Bowhunting Safety (TQ10 & 11)**

- Supplement archery safety rules learned at home or at the practice range.
- Point out five key rules:
  - Hunt and shoot within your own physical limitations and skills.
  - Let family or friends know exactly where you will be hunting.
  - Always carry broadheads in a sturdy quiver that fully covers razor-sharp blades.
  - Dress properly for the worst weather conditions you expect to encounter.
  - Carry basic survival gear every time you go afield, even for short hikes.

### **A note on handguns:**

In Alaska, some bow hunters carry handguns for bear safety. Please check to make sure that carrying a handgun on your archery hunt is legal before doing so. Remember the four rules of firearm safety before taking a handgun in the field:

- *Always control the muzzle of your firearm – point it in a safe direction (more difficult with a handgun).*
- *Keep your finger off the trigger until ready to fire.*
- *Treat every firearm as if it were loaded and keep unloaded until ready to use.*
- *Know your target and what is beyond.*

## **A RESPONSIBLE BOW HUNTER**

- *What does responsibility mean for a bowhunter? (TQ13)*
  - You are accountable for your actions.
  - You follow legal and ethical guidelines.
- *What five words describe a responsible bowhunter? (Write on classroom board)*
  - Safety conscious
  - Principled
  - Prepared
  - Marksman
  - Law-abiding
  - Respectful

## **Bowhunting Regulations**

- *What are hunting regulations designed to protect? (TQ14)*
  - Resources
  - Property rights
  - People
  - Population of game animals

- *How are hunting laws and regulations created?*
  - Passed by Board of Game (BOG) following a public hearing process
  - Public hearings – opportunity for input
  - State Constitution & Legislative action
  - Fish and wildlife biologists
- *Is hunting a right or a privilege?*
  - Privilege that can be taken away
- All hunters must be familiar with local hunting regulations. These include: ***Refer to Alaska Hunting Regulations - Restricted weapons hunts***
  - Legal bowhunting seasons.
  - Legal methods and equipment.
  - Animal tagging requirements.

### **Ethics–The Unwritten Law (TQ15)**

- *What are ethics?*
  - Moral codes or values that go beyond formal laws and regulations.
  - Referred to as “unwritten laws.”
  - Decisions we make when nobody is watching
  - What you think is right or wrong

### **BOWHUNTING RESPONSIBILITIES**

#### **Know and Respect Your Personal Limitations**

- All bowhunters should be aware of their limitations under various conditions, including:
  - General health.
  - Physical condition (can you physically get the animal out once harvested?).

#### **Respect Your Equipment**

- Select a bow that meets the legal and ethical requirements.
- Ensure that the bow is in good operating condition.
- Purchase arrows matched to the draw weight and draw length of your bow.

#### **Respect the Landowner (TQ19)**

- Treat the landowner’s property as if it were your own.
- Ask permission before entering private land, well in advance of the hunt.
- Leave gates open or closed as you find them (or as requested by the landowner).
- Drive only on existing roads or trails, do not create new trails. Cross streams at a 90 degree angle using slow speed.

### **Respect Game Animals and Resources (TQ18)**

- Respecting game involves following hunting laws, personal ethics and the principle of fair chase in order to harvest wildlife humanely and maintain healthy populations.
- Take the animal with a well-placed shot to avoid wounding.
- Shoot within your range.
- Learn game's habits and habitat.

### **Respect Your Hunting Companions (TQ17)**

- There are four key ways to maintain friendships on a hunt:
  - Shared Values
  - Dependability
  - Courtesy
  - Communication
- “The Unwritten Law of First Blood”: The first hunter to place an arrow in an animal's vital area, which draws enough blood to leave a trackable trail, may claim the animal.

### **Respect Non-hunters (TQ20)**

- Responsible bowhunters refrain from behavior that will turn people against hunting.
  - Displaying vulgar or obnoxious bumper stickers or clothing slogans.
  - Bragging or starting arguments with people who don't hunt or oppose hunting.
  - Using foul language in public.
  - Wearing bloody clothing or unnecessarily displaying dead animals in public.
  - Being intoxicated or impaired by drugs during, prior or after a hunt.

### **What happens if we act irresponsibly?**

- Bowhunters lost the moose hunt on the Anchorage Hillside due to irresponsible hunters trespassing, leaving gut piles in yards, wounding moose which the public saw with arrows sticking out of them. This hunt was held in 1983 and people still make comments about that hunt decades later.

### **BOWHUNTING'S PUBLIC IMAGE**

- The way bowhunters speak and act in public makes an impression on non-hunters.
- Bowhunters should be good ambassadors of their activity.

## Positive Actions by Responsible Bowhunters (TQ21)

Ask the class to list positive actions by responsible bowhunters and write answers on the board.

- Key actions include:
  - Covering game when transporting
  - Clean up after the hunt
  - Don't mix alcohol and bowhunting
  - Avoid confrontations with anti-hunters
  - Four C's:** Be courteous, considerate, capable and careful
  - Understand why you hunt and be able to tell others the benefits of bowhunting
- Bowhunters need to be good ambassadors of their activities at all times.

## CHAPTER FOUR

### *Know Your Bow and Arrow* (Approximate Time: 45 mins)

#### **Chapter Objectives:**

- Describe common bow types and identify basic parts using drawings or actual bows.
- Define draw length and draw weight.
- State why draw length and draw weight are determined for individual shooters.
- Explain the importance of matching equipment with individual abilities.
- Explain the importance of matching arrows with your bow
- Name the basic parts of an arrow.
- Define the terms “spine” and “paradox.”
- Name the different types of arrow points.
- Match arrow points to the game pursued.
- Name three essential accessories designed to prevent injury to the archer or bowhunter.
- Name three optional bowhunting accessories and state the purpose for each one.

#### **Materials**

1. Bows: if possible, bring an example of each bow to be discussed: longbow, recurve bow and compound bow.
2. Arrow shafts: if possible, wood, tubular aluminum, carbon, fiberglass.
3. Arrow fletching: if possible, straight, helical and flu-flu.

#### **INTRODUCTION TO BOWS (TQ29)**

“Certified Bowhunters Only” and “Bow and Arrow Only” hunts or areas, specifically exclude the use of other weapons, including crossbows.

- Display the three types of bows to be discussed. *Can anyone name these bows?*
  - Longbow, Recurve and Compound
- All three bows have basic parts in common. *What are they?*
  - Limbs            - Handle            - String
- Characteristics/advantages of each style.
  - Longbow
    - Straight Limbs
  - Recurve Bow
    - Limbs shorter than a longbow and curved.
    - Provide more power in a shorter bow than the longbow.
    - A popular choice: smooth, quiet and fast-shooting.
    - Pistol-style grip that adapts for use with bow sight/accessories
  - Compound Bow
    - Most popular
    - Wheels and cams reduce holding draw weight 50% or more

## **MATCHING YOUR BOW WITH YOUR ABILITIES (TQ22 & 24)**

- *Will any bow work for you?*
    - Must be matched to abilities.
    - Explain draw length and draw weight.
    - Discuss how you go about measuring ones draw length
  - *What happens if the bow doesn't match your draw length?*
    - Won't get best performance.
  - *What happens if the draw weight is too heavy? You can't fully draw bow.*
    - Should be able to hold bow arm parallel to the ground and pull straight back.
    - Use heaviest draw weight you can pull comfortably.
    - Many bows are adjustable for both draw length and draw weight
- THE BOW (Check Current Regulations)**
- (1) Must be 40 pound peak draw weight when hunting black-tailed deer, wolf, wolverine, black bear, Dall sheep, and caribou
- (2) Must be 50 pound peak draw weight when hunting mountain goat, moose, elk, brown/grizzly bear, muskox, and bison.

**THE ARROW – Always refer to the current Alaska Hunting Regulations – as equipment specifications do change.**

### **Arrow Shaft Warning: Follow these instructions to avoid personal injury**

- An arrow shaft can become damaged from impacts with hard objects or other arrows or after being shot into a game animal or target. A damaged arrow could break upon release and injure you or a bystander. You must carefully inspect each arrow shaft, nock, and other components before each shot to see that they have not been damaged.
- Before shooting, place the arrow between your thumb and fingers, and, using your other hand to slowly rotate the shaft, run your fingertips along the entire arrow length, feeling and looking closely for nicks, cracks, splits, dents, or other marks that could indicate the shaft has been damaged. When checking carbon arrows, perform the following additional tests:
  1. Grasp the shafts just above the point and below the nock, then flex the arrow in an arc (bending it away from you and others) with a deflection of 1 to 2 inches and listen for cracking noises. Perform this test four to six times, rotating the arrow slightly between each flex until you have gone around the entire arrow. If you hear or feel cracking, the carbon has been damaged.
  2. While still holding the point and fletching ends, twist the shaft in both directions. If the arrow twists easily, the carbon has been damaged.
- If an arrow has been damaged, or if you believe it has been damaged, do not shoot it again as it could break on release, and sharp arrow pieces could injure you or someone nearby.



## THE ARROW (TQ31)

- The arrow is tipped with a broadhead, is at least 20 inches in overall length, and at least 300 grains in total weight.
- Hold up an arrow. Ask if the class can identify the parts.
  - Arrow point
  - Shaft
  - Fletching
  - Nock
- Discuss various shaft materials and advantages/disadvantages.
  - Wood**
    - Often made from cedar, pine or spruce
    - Fletched with feathers.
    - Preferred by many archers who shoot a traditional recurve or longbow.
  - Tubular Aluminum**
    - One of the most popular shafts.
    - Made from specially formulated alloys.
    - Resistant to bending; lightweight.
    - Most accept screw-in points.
    - Fletched with feathers or plastic vanes.
  - Tubular Carbon-Fiber**
    - Fast and accurate.
    - Extremely strong and lightweight with a small diameter.
    - Accepts screw-in points.
    - Fletched with feathers or plastic vanes.
  - Tubular Fiberglass**
    - Inexpensive and durable.
    - For beginning archers.
  - Solid Fiberglass**
    - Used in bowfishing.
    - Extremely durable, heavy and deep-penetrating.
    - For pike, whitefish, burbot, and sucker (check current regs)
    - Attached to a bowfishing reel by high-strength line.
    - Usually fletched with a “slip-on” style plastic fletching.

## MATCHING ARROWS WITH YOUR BOW (TQ25)

- *Can you use any arrow with any bow?*
  - Arrows must be matched with your bow.
  - Mismatched arrows may not fly correctly or accurately.
  - Arrows that are too light may damage your bow.
  - Mismatched arrows can be dangerous – Arrows that are too light can come apart in a heavy bow, possibly causing severe injury!

## **Spine and “Archer’s Paradox”**

- Spine – degree of stiffness/resistance to bending.
- “Archer’s Paradox” – arrow bends when released from the bow.
- Spine strength must be matched to the bow.
- Use arrow manufacturer’s chart.

## **Arrow Length**

- Arrow length also must be matched to the bow.
- Short arrow may slip off the bow.
- Arrow that’s too long adds unnecessary weight.

## **Fletching/Vanes**

- Hold up an arrow and ask students the purpose of fletching/vanes
  - Stabilizes flight by causing shaft to spin.
  - Preserves speed and accuracy.
  - Made of plastic or feathers.
- Identify the different types of fletching/vanes and discuss the advantages/disadvantages. Refer to diagrams in student manual.
  - Straight**
    - Most common fletching/vanes arrangement.
    - Typically three fletches are glued symmetrically onto the shaft 120 degrees apart.
  - Helical**
    - Long fletches are glued onto the shaft in a slight spiral fashion.
    - Puts more spin on an arrow shaft than shorter fletching/vanes.
    - Often used on hunting arrows.
  - Flu-flu**
    - One or more turkey feathers.
    - Don’t fly far because of increased wind resistance.
    - Perfect for small game such as squirrel or game bird hunting.

## **THE NOCK**

- Made of plastic (some glow on release--lighted nocks).
- Serves as the attachment point to secure an arrow on a bowstring.
- Snap-on nocks.
- Nocks of all your arrows should be the same.

## **Nocking Point (Nock Locator)**

- Where the arrow attaches to the bowstring.
- Helps with consistency.

## ARROW POINTS

Discuss uses, refer to diagrams in student manual.

- **Target, Bullet, and Field Point**
  - Target shooting.
  - Can be matched to the weight of big game broadheads.
- **Judo ®**
  - Field practice and roving.
  - Weigh the same
  - Small, protruding wire springs prevent the arrow from disappearing in groundcover and tundra.
  - Weigh the same as most popular big game broadheads.
- **Blunt**
  - For small game animals, such as hares and squirrels.
  - Square-tipped.
- **Bowfishing (information is listed in Fishing Regulations)**
  - Designed to penetrate pike, whitefish, burbot, sucker and other fish.
  - Equipped with a strong barb.

## BROADHEADS (TQ 16, 26, 27, & 28)

*Refer to current Alaska Hunting Regulations for what is legal*

### The broadhead must be:

-A fixed, replaceable, or mechanical/retractable blade-type arrowhead that is not barbed with two or more sharp cutting edges having a minimum cutting diameter of seven-eighths (7/8") inch.

-All broadheads, regardless of type, must be sharp, durable, and matched to your equipment and the size of game being hunted. Before every hunt, you must examine them to ensure they are not dull.

Discuss three basic types of broadheads – fixed blade, removable and mechanical blade (all legal in Alaska) – and characteristics. Refer to diagrams in student manual.

- **Fixed Blade**
  - Used by many traditional-style bowhunters.
  - Some types are designed to glue directly onto the arrow shaft.
  - Most are screw-in type.
  - Most are 'cut on impact' style
- **Removable Blade**
  - Blades are replaceable and should be sharpened or replaced whenever close examination shows that they are dull.
- **Mechanical or Expandable Blade**
  - Blades are retracted close to the ferrule before the shot.
  - Open on impact.
  - Less likely to plane.

## **ACCESSORIES: Essential Items**

- Arm Guard
- Finger protection
  - Finger tab or glove
  - Mechanical release
- Quiver
  - Backpack or Fanny Pack
  - Arrow Holder/Bow Quiver

## **Optional Items**

- Bow Sights and peep sight
- Cable/String Silencers
- Limb/Accessory Silencers
- Stabilizers
- Insulated Grips
- Arrow Rest Assembly
- Overdraw Assembly
- Kisser Button

## CHAPTER FIVE

### *Preparation Before the Hunt* (Approximate Time: 1 hour)

#### **Chapter Objectives:**

- Describe the importance of proper clothing, including camouflage.
- List six basic steps for shooting with a bow and arrow.
- Demonstrate proper shooting steps.
- Explain the importance of a consistent anchor point and proper sight picture.
- Describe how to sight in a bow.
- Describe how to tune a bow.
- Name two common bowshooting errors and describe how to correct them.
- Describe three ways to practice for bowhunting.
- List two types of distance judging methods, and estimate distances to at least four life-size animal targets with and without a range finder.
- Explain why understanding wildlife habits and habitat are important to the bowhunter.

**Materials and equipment:** No additional materials needed

#### **THE WELL-DRESSED BOWHUNTER**

- *Next to your bow and arrows, what's your most important consideration?*
  - Clothing
- There are four things to consider when selecting clothing. The first is protection from the elements. *What are the other three?*
  - Low noise
  - Proper fit
  - Camouflage

#### **Staying Warm in Cold Weather**

Because bowhunting is often done in cold weather, special consideration must be given to staying warm. Pick materials that wick away moisture and keep you warm when wet – remember cotton kills! Blue jeans and flannel hold moisture!

- Dress in several layers of clothing.
- Start with a layer of synthetic underwear designed to wick away moisture.
- Types of fabric/material.
  - Synthetics are quiet, water-resistant and add warmth without weight.
  - Wool clothing is an excellent insulator, even when wet.
  - Goose-down is lightweight/excellent insulator—but does not insulate when wet.
- Cover neck and head.
- Choose boots carefully and wear good socks and sock liners (wool, wool/blend, wicking, seal skins).
  - Rubber helps in eliminating scent.
  - Purchase boots a size larger to accommodate layers.

- For extremely cold weather, insulated boots are available.
- Carry one or two extra pairs of socks.

### **Stay Dry in Wet Weather**

- For wet weather conditions, there are several types of waterproof or water repellent garments – good raingear is especially imperative in Alaska and will save your life!
  - Coated nylon or plastic – traps perspiration.
  - Rain gear with a breathable membrane (Gore-Tex, Impreteck, Dry-Plus).
  - Traditional poncho – poor choice.

### **The Invisible Bowhunter**

- Camouflage is essential for getting close to game.
  - Wearing head-to-toe camo clothing will break up your human shape.
  - Select patterns that have a good contrast between light and dark colors.
  - Equipment is also available in camo.

### **PREPARATION MEANS PRACTICE**

- Now that you're properly equipped, you're ready to start practicing for the hunt. A successful bowhunt depends on your archery skills, and those are built on proper form.
- Using a safe target and backdrop, demonstrate proper form for holding a bow and the six basic steps for shooting:
  - Assuming the position
  - Nocking an arrow
  - Drawing and anchoring
  - Aiming
  - Releasing
  - Follow-through

### **Bow-Shooting Errors**

Ask students to suggest errors and, when possible, demonstrate with your bow and arrow.

- Poor follow-through.
- Tight finger grip
- Inconsistent anchor point.
- Flinching or twitching during a release.
- Poor release on the string.
- Muscle fatigue.
- Over-gripping, squeezing or jerking the bow grip.
- Bending the arm of the bow hand.
- Seeing the wrong sight picture.
- Lack of focus on the sight picture.

## **Sighting In**

Discuss this procedure:

- Shoot five arrows at target.
- Place a grouping.
- Adjust sights. For sights, follow your arrows when adjusting (ie: if arrow is right of target, move sight right of target)

## **Tuning Your Bow**

- If your bow isn't properly tuned, fishtailing or porpoising results.
- Discuss the tuning process:
  - Adjusting the nocking point up or down.
  - Adjusting arrow rest assembly from side to side.
  - Many archers require the assistance of a professional since it is a more advanced skill.

## **Advanced Archery Practice for the Hunt (TQ30 & 32)**

- *When should you begin practicing for your hunt?*
  - Months before the season.
  - Top bowhunters practice year-round.
- Other things to consider:
  - Practice with the arrow tips you'll hunt with.
  - Tune your bow.
  - Fix equipment problems.
  - Practice with full-size, 3-D targets.
  - Practice from unknown distances.
  - Practice from all positions, angles, and elevations.
  - Establish your personal "zone of confidence."
  - Practice in the clothing you plan to wear when you hunt.
- *How long should you practice?*
  - Until you can consistently hit what you're aiming at.

## **Learning to Judge Distances**

- *What affects your ability to judge distances?*
  - Optical illusions
  - Perceptual expectations
  - Steep uphill or downhill shots
  - Ground cover or local terrain
  - "Buck fever"
- Why is the ability to judge distances accurately a critical skill in bowhunting?
  - Arrows have a short trajectory.
  - Critical for shot placement.
- *How accurate does your judgment need to be?*
  - Within 90 - 95% accurate.
- Discuss the four distance judging methods.
  - Actual Distance Judging      -Subtending
  - Markers                              -Range Finders

## **PREPARING TO HUNT YOUR QUARRY**

- *Why are understanding wildlife habits and habitat important to the bowhunter?*  
Helps to locate and get close to game.
- *What do you need to learn about your quarry to hunt successfully?*
  - Habits, food preferences, habitat and other characteristics.
  - Anatomy.
  - Game sign – clues to the location of animals. Three types:  
Visual / Auditory / Smell
- *What are some examples of game sign?*
  - Visual Signs:
    - Tracks
    - Scrapes made by hooves or rubs made by antlers
    - Scat (droppings)
    - Terrain that may shelter or attract animals
    - Trampled vegetation
    - Bodily fluids
    - Bone, hair or feathers
    - Trails
  - Auditory Signs
    - Bleating or calling signs
    - Calls from other animals, such as deer snorts
  - Smell
    - Musk or rut odors

## **Scout the Hunting Area**

- *What do you need to scout an area before the hunt?*
  - Topographical map. *What does it show you?*
  - Features such as water, fields and wooded areas.
- *How do you scout a hunting area?*
  - Careful slow travel
  - Stump sitting
- *What are you looking for besides game?*
  - Game trails and tracks
  - Bedding areas
  - Waterholes or feeding areas
  - Scrapes and rubs



## CHAPTER SIX

### *Elevated Stands & Other Bowhunting Techniques* (Approximate Time: ½ hour)

#### **Chapter Objectives:**

- Identify two methods of bowhunting and describe two advantages for each.
- List three types of manufactured portable stands.
- Explain why falls from elevate stands are a major concern for bowhunters.
- Explain and demonstrate the proper use of a fall-restraint device. (A demonstration should be done under supervision. If you are practicing or demonstrating suspension, be sure to strap the device to the tree so that you hang no more than six inches off the ground.)
- Explain and demonstrate how to safely enter and exit an elevate stand. (This may be done with an actual stand set no more than three feet high for demonstration purposes.)
- Demonstrate proper use of a haul or hoist line.
- Name the two categories of scents.
- Describe scent-limiting hunting techniques,
- Identify artificial calls that can attract game.
- Explain how to rig your bow for bowfishing.

#### **Materials and equipment:**

1. Full-body fall arrest system (harness)
2. Single belt and chest harness
3. Portable tree stands (if available)

#### **STILL HUNTING, STALKING AND GLASSING**

- *What's the difference between still hunting, stalking and glassing?*
  - Still hunting – moving slowly through woods until you spot game.
  - Stalking – approaching game after you spot it.
  - Glassing – searching for game with binoculars from one location.
- *When approaching game, does wind direction matter?*
  - Approach downwind.
- *What are the advantages of these methods?*
  - Most effective methods for hunting big game animals.
  - Find more sign.
  - Enjoy beauty of wild landscapes.
- *What's the disadvantage of still hunting and stalking?*
  - Movements alert animals.

## **BLINDS**

### **Ground Blinds**

- *Where are ground blinds placed?*
  - Close to game food sources, game trails or watering holes.
  - Downwind or crosswind.
- *How are ground blinds constructed?*
  - Vegetation or rigged from camouflage cloth netting or pop up blinds.
- *What else do you need to think about when constructing or using a blind?*
  - Clear away ground cover – creates noise.
  - Use bucket or stool.
  - Wear camo.
- *What are the advantages of ground blinds?*
  - Can be set up ahead of time along trails.
  - Provide effective camouflage.
- *What are the disadvantages?*
  - Human scent and movement at ground level.
  - Limited visibility and shooting lanes.

### **Pit Blind**

- *How is a pit blind different from a standard ground blind?*
  - It's built around a shallow hole dug about knee-deep into the ground.
  - Can you build a pit blind anywhere you want and leave it?
  - Must check local laws and regulations.
  - Get permission from landowners.
  - Must return the blind site to its natural state.
- *What are the advantages of the pit blind?*
  - Lower silhouette.
  - Comfortable ledge seat.
  - Can be made large enough to accommodate variety of gear.
- *What are the disadvantages of pit blinds?*
  - Prohibited in most state-owned hunting areas.
  - Not portable.
  - Hunter scent and movement easier to detect.

## **ELEVATED STANDS**

### **Show DVD**

- *What's the most common type of elevated stand?*
  - Tree stand
- *What are the advantages of hunting from a tree stand?*
  - Wider field of view.
  - Early detection of game.
  - Hunter's scent is dispersed and movement harder to detect.
  - Shot angle potentially creates better blood trail.
  - Provides a better vantage point for viewing wildlife.

- *What are the disadvantages of hunting from a tree stand?*
  - Risk of falling.
  - Difficulty in carrying.
  - Hunter's scent is more dispersed
  - Little protection from the cold or wind.
  - Little room for movement.
  - More challenging to estimate distances and shoot accurately.

### **Portable Tree Stands**

- *What's the main advantage of a portable tree stand?*
  - Can be positioned on a tree quickly and quietly.
- *How do you know that a commercial portable tree stand is safe to use?*
  - It's certified by the Treestand Manufacturers Association (TMA).
- *What are the three basic types of portable stands?*
  - Non-climbing, fixed-position stands that chain or strap onto the tree.
  - Climbing stands.
  - Ladder stands.
- *How do you install a non-climbing, fixed-position stand?*
  - Haul into place, secure with belts or chains.
  - Require separate climbing aid – segmented ladder, screw-in steps/strap on steps.
- *Are screw-in steps legal in most places?*
  - Illegal on public lands in many states.

### **Climbing Tree Stands**

- *What is a climbing tree stand?*
  - Allows hunter to “walk” a stand up a tree using two separate climbing devices.
- *Can you use this on any tree?*
  - Not suited for trees with shaggy bark, or low branches.
  - Never use on trees covered with ice or snow.

### **Ladder Stands**

- *What is a ladder stand?*
  - Provide a platform 10 to 15 feet above ground.
  - Stands are leaned against a tree and chained or strapped into place.
- *What's the main advantage of these stands?*
  - They can be used with a wider range of trees than other portable platforms.
  - Built-in ladder proves easier, safer access.
- *Can you install a ladder stand on your own?*
  - Two or three people may be needed to safely erect a ladder stand.

### **Free-Standing Open Platform Stand, Tripods and Quadripods**

- *What if there aren't any trees and you still want an elevated platform to hunt from? What do you use?*
  - Free-standing, elevated stands.
  - Platforms are supported by guy wires and a minimum of three sturdy legs.

## **Tower Stands**

- Tower stands are elevated blinds – fixed, enclosed, box-like platform stands.
- *Are these used by bowhunters?*
  - Rarely; requires windows or mesh designed to shoot through

## **TREE STAND SAFETY**

- Tree stand hunting can be dangerous.
- Falls from tree stands can cause serious injury – even death.
- More likely to cause fatality than any other bowhunting accident.
- *What conditions contribute to accidents?*
  - Long hours sitting on stand.
  - Poor bowhunting technique.
- Of all bowhunting accidents, falls from elevated stands have highest potential for fatalities
- *What kinds of behavior or attitudes lead to falls?*
  - Complacency (“This won’t happen to me” attitude)
  - Poor judgment
  - Carelessness
- *What’s your most important piece of equipment when you’re in a tree stand?*
  - Fall restraint device.

## **Recommendations for Using Elevated Stands**

- Read instructions.
- Know proper set-up procedure.
- Step down into the tree stand.
- Use TMA-approved stands.
- Always attach yourself to the tree when climbing up/down as well as when on platform.
- Climbing tree stands require extra precaution.
- Always use a haul line to bring your gear up and down from your platform.

## **Inspecting and Preparing Stands**

- Thoroughly inspect elevated stands.
- Tighten bolts and replace worn parts.
- Test stands for squeaks or noises and lubricate with vegetable oil.
- Use coarse grid strips to improve traction.
- Never leave a tree stand attached to a tree for more than two weeks.

## **Selecting a Stand Location**

- *Where should a stand be placed for the greatest effect?*
  - Where game sign indicates food, travel, water, wallows, and breeding.
  - On the side of a trail or travel route.
  - Consider multiple stand locations.
  - Never place a stand in a dead tree or under large overhanging dead limbs.

- *Is the sun a factor to consider?*  
-Sunlight could highlight the profile of your body.  
-Use a tree large enough to cover your body outline.
- *Does it matter if a tree trunk is straight or curved?*  
-Trees should be straight as possible.  
-A trunk leaning toward you can “push” you out of a stand.

### **Fall-Restraint Devices – Full Body Harness (TQ34)**

- Show full body harness to the class, and then demonstrate how to put it on.
- Explain how a climber uses a full-body harness.
- For comparison, show the class a simple belt device (if available).
- *Why does the NBEF recommend wearing a full-body harness?*  
-Belts can cause internal injuries and death by asphyxiation.  
-A full-body harness distributes the shock of fall; suspends you better.
- *When do you need to wear your full-body harness?*  
-When installing elevated platform.  
-Climbing into or out of the platform.  
-While on a platform.
- *The restraint should be attached so that you drop less than, how much, if you fall?*  
-One foot.

### **Hauling Equipment into a Stand (TQ36)**

- *Should you carry your bow and arrows with you when you climb?*  
-Always use a haul line of heavy cord to raise and lower gear.  
-After you are securely on your platform, haul up your gear.
- Demonstrate how to tie a haul line to a bow and quiver.
- *Where do you want to place your bow and quiver while you’re climbing?*  
-Away from your climbing route

### **USING SCENTS AND LURES**

- *Why are scents and lures an important consideration when bowhunting big game?*  
-Big game animals are sensitive to scent.  
-Bowhunting is done a close range, where scent is easily detected

#### **Cover Scents**

- *What’s the purpose of a cover scent?*  
-Cover human scent.
- *Where do you apply scent?*  
-Skin, footwear or clothing.  
-Scent-soaked pieces of cloth around their stand or blind.

#### **Attractants**

- *How do attractants work?*  
-Offer animals a tempting odor.  
-Mimics food sources, scents that sexually arouse males and curiosity scents.

- *How do you use attractants to stop a deer at a pre-selected pick-off spot?*  
-Sprinkle a few drops of scent on a leaf or twig at that site.
- *Do you want to apply attractants to your skin or clothing?*  
-No. Deer will follow the scent and detect your position.

### **Bear and Deer Tips**

- Bears and deer are very sensitive to human scent. *What are some things to do to avoid detection?*  
-Stay as clean as possible while hunting.  
-Avoid using fragrant soaps and perfumes.  
-Wear hunting clothing made with special scent-absorbing fabric.  
-Use cover scents.  
-Avoid using fragrant laundry detergents on hunting clothes.  
-Hunt from a tree stand to keep human scent above the animal's nose.  
-Hunt downwind from a game trail; always be aware of the wind direction.

### **USING GAME CALLS**

- *What are the four basic types of game calls? (Describe each.)*  
-Position calls  
-Distress calls  
-Aggression calls  
-Mating calls

### **BOWFISHING**

- *What species of fish are ideal and legal for bowhunting? Please refer to Sport Fish Regulations under Special Regulations – Use of spears or bow and arrow.*  
-Northern Pike  
-Whitefish (excluding Sheefish)  
-Burbot  
-Suckers
- *What specialized equipment do you need to bowhunt fish?*  
-Solid fiberglass arrow with a specialized fish point and attaching point on the shaft for the line.  
-Large spool, container or casting reel to feed out line.
- *What's the primary challenge of hunting fish underwater?*  
-Refraction
- *How do you compensate for refraction?*  
-Aim low

## CHAPTER SEVEN

### *Shot Placement & Recovery Techniques* (Approximate Time: 45 minutes)

#### **Chapter Objectives:**

- Describe how an arrow with a sharp broadhead kills.
- Explain the importance of proper shot selection and shot placement.
- Describe the main vital area on big game and the shot that offers the best opportunity for success.
- Identify the main vital area and primary aiming zone on at least three different game species.
- Explain how the shot angle affects a bowhunter's ability to make a clean kill.
- Define "jumping the string."
- List two examples of poor shot selection.
- List three reasons why long shots increase the risk of wounding game.
- Correctly choose the right action to take in "shoot/don't shoot" scenarios presented in illustrations.
- Explain a bowhunter's basic responsibilities after shooting game.
- Describe the basic steps of big game recovery.
- List the steps to follow when the animal being tracked is found.
- Describe how to properly field dress a big game animal.
- List two reasons for proper transportation of harvested animals in a vehicle.

#### **Materials:**

1. Full-size 3-D deer target.
2. Mini bear or deer vital shot placement 3-D.
3. Poster-size illustration of bear vitals.

#### **SHOT IMPACT: HOW ARROWS AND BULLETS DIFFER**

- Ask for volunteers to describe how arrows and bullets kill.
  - Bullets: high-energy impact; crush tissue/bone; may knock down animal.
  - Arrows: low-energy impact; kills by cutting vital tissues.
- *Why is proper arrow placement critical when bowhunting?*
  - Hit outside vital area may have little impact or result in wounding loss. Recovery will be difficult or impossible.

#### **How a Broadhead Causes Death (TQ 37)**

Refer to illustration of deer chest cavity.

- *What happens when an arrow enters the chest cavity of an animal?*
  - Cuts blood vessels; produces massive blood loss – death by hemorrhagic shock.
  - May puncture lungs – death within seconds.
  - May disrupt heart muscle.

- *How much blood must an animal lose to die of hemorrhagic shock?*  
-One-third
- *How long does it take for an animal to die from bleeding?*  
-Minutes to several hours.  
-Depends on animal's size; where it's hit.

## **SHOT PLACEMENT**

- *Why is proper shot placement critical in bowhunting?*  
-Required for clean kill.

### **Chest Cavity – The Main Vital Area (TQ38)**

- *Where's the primary target on big game animals? A responsible bowhunter only takes a shot that can reliably strike this area.*  
-Chest cavity – heart/lungs/liver.
- *What's the most effective shot on deer-size animals?*  
-Angling forward (45 degrees).  
-Best angle to hit vital organs (heart/lungs/liver).
- *What's the next best shot?*  
-Broadside (Double-lung hit)  
-Good blood trail; animal drops within short distance.

### **Abdominal Cavity**

- *Is the abdominal cavity a good aiming zone?*  
-No – usually slow death.  
-Poor blood trail.

### **Shots Outside the Main Body Cavities**

- *Should you attempt a shot outside the main body cavities?*  
-No. Risk of wounding too great.

### **Spine Shots**

- *Should you attempt a spine shot?*  
-No. Too difficult.
- *What should you do if you accidentally hit a deer in the spine?*  
-Shoot the animal a second time. *Why?*  
-Animal may drop from “spinal shock,” then recover and run away

### **Primary Aiming Zone – Vital Area (TQ33)**

- Primary aiming zones vary according to species. Knowledge of the animal's anatomy that you are hunting will determine an aiming point in the vital area.  
*Resource: “The Perfect Shot” for N. American Big Game--Craig Boddington*
- *Identify vital area on a black bear?*  
-Just behind the front leg/elbow of a black bear (Use the 3-D model to show exact spot.)  
-Focus on quarter-size spot in the middle of the kill zone



## SHOT STRATEGY

- *What's one of the most common reasons bowhunters miss opportunities to take an animal?*  
-“Target Panic;” “Buck Fever”
- *How do you avoid “Buck Fever?”*  
-Planning.  
-Determine possible pick-off points, shot angles.  
-Visualize animal's approach.  
-Take practice shots.

### Choose the Proper Shot Angle

Use an arrow and a 3-D deer or bear target to demonstrate the various shot angles.

- **Broadside**
  - This is a good shot for big game animals. *Why?*
    - Shortest distance through chest cavity; produces two exit wounds; increases blood loss. Best angle for double-lung hit.
  - What body part do you want to avoid in this area?*
    - Shoulder blade – wait until front leg is forward.
  - Does it matter where the animal's looking?*
    - Yes – away from you or feeding.
- **Quartering Away**
  - This is a good angle for deer, caribou, black bear and other big game of similar size. *Why isn't it a good angle for larger game, such as elk or moose?*
    - Their guts may get in the way of a clean shot through the lungs or heart.
  - Is distance a factor when shooting at deer-size animals?*
    - Present a smaller target than elk or moose; should be shot from closer range.
  - What's a good reference point when aiming at this angle?*
    - Opposite front leg.
- **Quartering Toward**
  - This is a poor shot and shouldn't be taken. *Why?*
    - Shoulder bones shield vital organs.
    - The animal is typically looking toward hunter.
- **Head-on and Rear-end**
  - These are also bad shots. *Why?*
    - Heavy bones in front.
    - Muscle mass and non-vital organs in back.

### Consider Your Location

Your location above or below the target presents additional considerations.

- **Above your target.** *What should you be aware of as you climb above your target?*
  - Vital area becomes smaller, shielded by shoulder bone and spine.
  - Shooting posture: bend at the waist and don't drop bow arm while at full draw.
- **Below the Target.** This is not a high percentage shot. *Why?*
  - Aiming spot is lower on the body; sternum may shield part heart at this angle.

## **SETTING UP THE PERFECT SHOT**

Ask the class to list the considerations for setting up the perfect shot and write them on the dry erase board or flip chart. (Each of these considerations has been discussed previously).

- Proper placement of stand/ground blind.
- Downwind location.
- Good camouflage and concealment techniques.
- Effective use of covering/attractant scent and game calls.
- Limiting movements.
- Shooting within effective range.

## **Picking the Right Moment to Shoot**

Picking the right moment to shoot involves three key things. The first is controlling the urge to shoot when you first sight your game. *What are the other two?*

- Wait until animal is looking away from you to come to full draw.
- Wait to shoot until animal has reached “pick-off” spot.

## **Why Shots Go Wrong (TQ40)**

Ask the class to list the reasons shots go wrong and write them on the dry erase board (most of these reasons have been discussed previously).

- Shooting beyond your effective range. Taking long shots also gives the animal more time to move.
- Shooting when animal is looking at you.
- Poor shot angle.
- Muscle fatigue.
- Poor shooting technique or release.
- Little or no knowledge of game’s vital areas.
- Not focusing on aiming spot.
- Shooting when brush or limbs are in shooting path.
- Shooting when animal is running or moving.
- Poor mental or physical condition.
- Poor light conditions.

## **BIG GAME RECOVERY (TQ42)**

The bowhunter is responsible for game recovery.

- Bowhunters often refer to game recovery as their “second hunt.”
- Introduce the requirements for successful game recovery:
  - Proper shot placement.
  - Knowledge of tracking and reading game sign.
  - Attention to visual and auditory clues immediately after the shot.
  - Knowing when and how to begin tracking.
  - Attention to trailing details.
  - A stick-to-it attitude.
  - Patience.
  - Recovery strategies.

## Attention to Clues

- *What's the first important piece of information needed for a successful recovery?*
  - Where your arrow strikes the animal.
- *That gives you a rough idea of what?*
  - How long it will take your animal to die.
  - How long to wait before beginning the recovery process.
- *In addition to where your arrow strikes your animal, what other things do you need to notice when your arrow strikes your prey? List responses on the dry erase board.*
  - How far the arrow penetrates – may pass through.
  - Where the arrow hits the ground if it passes through.
  - How the arrow strike sounds.
  - How the animal reacts after the strike.
  - Which way the animal runs out of sight.
  - Sounds of the animal's flight.
  - Time and landmarks around shooting area.

## When to Begin Recovery (TQ41)

- *How long should you wait before beginning recovery?*
  - Chest wound in vitals – 20-30 minutes
  - Gut shot – at least six hours.
- *Why wait so long for gut shot?*
  - Approach may spook animal; it can travel great distances before collapsing.
- *What can you expect from a hit outside the chest or body cavity?*
  - Animal may run away, stop bleeding.
  - Often animal will survive.
- *Is it a good idea to pursue the animal immediately after a hit like this?*
  - Following aggressively may cause bleeding to continue; cause death from minor wound.
  - Only pursue if conditions are right.
- *What do you do if you're not sure where you hit your animal?*
  - Wait 30-60 minutes.

## Trailing Game

Ask the class to list the steps to take to begin trailing game and write them on the dry erase board or flip chart.

- Approach carefully.
- Look carefully for blood, hair or the arrow.
- Move in direction animal headed.
- Look for blood on leaves, rocks and logs.
- Walk on side of escape route. Mark location of blood sign.
- Always scan ahead for the animal.

## **Blood Sign (TQ39, 44, & 45)**

- *What can you learn from studying blood sign?*
  - Direction animal is traveling. Blood splashes in direction the animal is moving (draw example on the board)
  - Bright blood indicates bleeding from the arteries
  - Darker blood indicates bleeding from the veins
  - If blood has bubbles or looks frothy, it could be a lung hit
  - If the fluid is greenish, has tallow, or is clear, it can indicate a gut shot

## **Lost Sign**

- *What do you do if you lose sign?*
  - Go back to last marker.
  - Begin methodical search.
  - Use grid pattern.
  - Be aware of wildlife activities that could signal downed animal.
  - If necessary, search from the beginning.
  - Don't give up until all possibilities have been exhausted.

## **APPROACHING DOWNED GAME**

- When approaching downed game, it's best to start from the rear. *Why?*
  - Animal may jump up.
- *What steps do you take when you approach?*
  - Stop and observe rib cage
  - Check eyes – should be open
  - Use stick or bow to prod animal (use extreme caution if taking this step)
  - If animal is still alive, shoot again
  - Don't handle until you're sure it's dead
  - Tag

## **FIELD DRESSING**

- The way you handle game after the harvest can have a significant impact on the quality of the meat. Refer to ADF&G's "Field Care of Big Game." Video provides another method of caring for big game animals in Alaska.
- Refer to current Fish & Game Regulations regarding meat salvage in Alaska. Wanton waste of big game meat is an extremely serious offense punishable by a fine of up to \$10,000 and one year in jail.
- Big game meat you must salvage include:
  - All of the neck meat
  - All of the brisket (chest meat)
  - All of the meat of the ribs
  - Front quarters as far as the knee
  - Hindquarters as far as the hock
  - All meat along the backbone (backstrap and tenderloins)
- Refer to current regulations for GMUs that require meat to be left on the bone when salvaged. This includes the entire rib cage in certain GMUs.

- When salvage of black bears is required, you must salvage the meat of the front quarters and hindquarters and backstrap
- Refer to current regulations for bear meat salvage requirements in fall seasons compared to spring seasons and various GMUs.
- *What three factors contribute to spoiled meat?*
  - Heat
  - Dirt
  - Moisture

### **Keep it clean, cool, and dry (TQ43)**

- Heat is the greatest concern. *Why?*
  - Bacteria grow rapidly in warm carcass.
- *How does field dressing help to cool the carcass?*
  - By removing the entrails/hide, releases heat from body mass
  - Best done immediately to allow cool air into body cavity
  - Need to protect from flies

### **Basic Procedure (TQ 35)**

- *What tools do you need before you start?* Write answers on a dry erase board
  - Tarp or Visqueen
  - Latex/Rubber Gloves
  - Sharpening Tool
  - Good quality game bags
  - Citric acid and spray bottle
  - Rope
  - Meat saw
  - Knives
- *Where do you cut?*
  - From the sternum to anus
  - Inside the body cavity, cut connective tissue to remove organs, no need to gut moose, can quarter, turn over then quarter other side
- *Some things to think about as you're cutting*
  - Not necessary to slit animal's throat
  - Trophy animal should not be slit up the neck
  - Avoid cutting or puncturing internal organs
  - Remove hide when animal is still warm (easier)
  - Keep quarters off the ground for good air circulation
  - Be on the lookout for imbedded broadhead
  - Empty the contents on a slight incline
  - Prop body cavity open to cool and lift off ground if possible
  - In warm weather, remove hide using knuckling

## **Moving a Big Game Animal**

- Get help moving big game animals from the field.
- Quarter and debone large animals into manageable pieces that can be moved  
\*\*check specific GMU regulations
- Drag large animals on a slick tarp or sled with a rope.
- Keep animal covered when transporting in vehicle.
- Proceed immediately to your final destination or a licensed meat processing facility.

## CHAPTER EIGHT

### *Outdoor Preparedness* (Approximate Time: 45 minutes)

#### **Chapter Objectives:**

- After completing this lesson, students will be able to:
- State the primary reason why a bowhunter needs to develop a hunting plan for every hunt and be able to complete a sample plan.
- List hazards bowhunters may face when hunting.
- List at least four basic necessities to carry in a survival kit.
- List three common types of bowhunting injuries.
- Describe the treatment for broken bones.
- Describe the treatment to stop serious bleeding.
- Describe the treatment for an arrow wound in the chest or abdominal area.
- Explain what to do when injured from a fall.
- Name six basic parts of an orienteering compass.
- Describe how to compensate for declination when using a compass.
- Be familiar with the basic features of a topographical map.
- Using the acronym STOP, describe what to do when lost.
- Describe how to prepare a natural shelter if you get lost.
- Describe how to start a fire.
- Describe how to signal for help.
- Describe two ways to purify water.
- Describe the cause of hypothermia, its prevention and treatment.
- Describe the cause of heat exhaustion, its prevention and treatment.

**Materials:** No additional materials needed

#### **IMPORTANCE OF PLANNING AND PREPARATION**

- *What three things contribute to risk of accidents when bowhunting?*
  - Equipment (broadheads)
  - Rough terrain
  - Climate extremes
- *What's one way to assess risks?*
  - Visualize every step of the hunt.
  - Ask yourself what could go wrong at any point.

#### **Prepare a Hunting Plan (TQ46)**

- A hunting plan tells where and with whom you are hunting, and when you expect to return. Give it to two responsible people.
- *What are some specifics that you need to give besides the day and time you'll return?*
  - Directions on your route to your destination.
  - Alternate destinations you may have if bad weather alters your plan.

## Primary Hazards

- *Bowhunters typically face three primary hazards – what are they?*
  - Falls, especially from tree stands.
  - Cuts or lacerations from broadheads or knives.
  - Long-term exposure from being lost or in the outdoors for too long.
- *Most of the accidental deaths in bowhunting are caused by what?*
  - Falls from tree stands.
  - Drowning is the number one hunting accident.

## Gearing Up for Safety

- Every hunter needs a first aid kit. *What should the kit contain beyond the basics?*
  - Supplies to deal with major bleeding (broadhead accident), such as a large dressing pad, sanitary napkin or triangular bandage.
  - Personalized supplies: prescription drugs, over-the-counter medications you use regularly.

## Discuss Safety Issues with Hunting Companions (TQ48)

- It's a good idea to hold a pre-hunt meeting with your hunting companions to discuss first aid, CPR and other emergency plans. *The most important tool in a survival situation is your head.*
  - Mentally prepares everyone for accidents.
  - Lets everyone know how the group will respond to an emergency.
  - Determines who has been recently trained in first aid or CPR.

**BASIC FIRST AID** – *Recommend that students take a first aid class before going out in the field.*

## Bleeding (TQ 50)

- *What's the best way to control serious bleeding?*
  - Firm and direct pressure
- *What should you remember about bandages for severe bleeding?*
  - Use a thick, soft, clean pad.
  - Avoid contaminating the wound with dirt, grass or other foreign matter.
  - Once applied, try not to remove the pressure bandage.
  - If the bandage becomes soaked with blood, put another layer over the top.

## Dealing with an Arrow Wound

- A deep wound in the chest or abdomen calls for quick action. *Should you remove the arrow?*
  - No. Leave it
  - Try to stabilize the arrow.
  - Give medical professionals a duplicate of the arrow imbedded in the victim.

## Broken Bones

- *Should you move someone with a back or neck injury?*
  - No. Medical professionals are required.



- *How should you handle other broken bones?*
  - Use splints to keep broken bones stable.
  - Use a belt, rope or strips of torn clothing to bind the splints and broken bones together.
  - Move the victim carefully and only as much as necessary.

### **If You Fall**

- *What do you do if you fall from an elevated stand and you're all alone?*
  - If your injuries are immobilizing, use your signal.
  - If you can move, consider whether you can make it to assistance.
  - If you have broken bones, sprains or cuts, use what's available for first aid.
  - Clothing/large handkerchiefs can be used to stop bleeding and provide padding.
  - Use belts, shoelaces, bowstrings or haul lines to secure splints.
  - Your bow, arrows, branches or poles can provide rigid support of broken bones.

### **SURVIVAL KIT –**

**\*\*Your kit needs to be personal and on your body at all times.**

- *What are some key items that you should have in a survival kit?*  
Heat, Shelter, Water, Food
  - Proper clothing is essential in Alaska for survival. Layers, wool/fleece/ dry feet, extra pair of socks – this is your primary shelter.
  - Waterproof fire-starting materials (magnesium, Vaseline cotton balls).
  - Folding saw.
  - Signaling device (usually a whistle, flares, mirror, strobe light).
  - Compass – and know how to use it.
  - High-energy food bars or packs of trail mix (nuts and dried fruit).
  - A large square of plastic or a space blanket.
  - Water filter for *Giardia lamblia*
  - Personal medication
  - Extra batteries for GPS and flashlight.
  - Parachute cord.
  - Emergency Locator Transmitter (ELT) or SAT Phone

### **TOPOGRAPHIC MAPS AND COMPASSES**

- *What does a topographical map tell you about the terrain?*
  - Contour lines show the elevation of the ground.
  - Contour intervals show how much vertical distance exists
  - Contour lines that are sharply tapered and close together indicate steep terrain.
  - Rounded contour lines typically indicate less steep terrain.

## Orienteering Compass

- An orienteering compass is designed to be used with a topographical map. *What are the six basic parts?*
  - Magnetic needle
  - Clear base plate
  - Direction of travel arrow
  - Azimuth ring
  - Orienting arrow
  - Index line

## Declination

- *Does a compass point to true north?*
  - No. Magnetic north.
  - The difference between true and magnetic north is declination.
- Discuss how to compensate for declination.

## Plot Your Progress

- *As you hike into unfamiliar terrain, you can plot your progress by doing what?*
  - Take frequent compass readings.
  - Note key points, such as stream crossings.
  - Pay particular attention when you reach a high point.
  - Use the elevation to locate landmarks.

## GPS

A great tool but:

- Must know how to use it.
- Needs batteries (carry spares).
- Mechanical so it can fail. Have a compass as a backup.

## IF YOU GET LOST

- *What should you do when you first realize you're lost?*
  - STOP
    - Stop
    - Think
    - Observe
    - Plan
  - Most important, stay calm.
- *If you decide to stay in one place and wait until you're found, what are your three priorities?*
  - Shelter, fire and signal.

## Shelter

- Look for natural shelter – a rock overhang or a thick stand of evergreens.
  - Site should be dry, well-drained and offer protection from the wind.
  - If possible, near water and plenty of firewood.
- *What do you do if no natural shelter is available?*
  - Pick an area with materials nearby to build a lean-to or debris hut.

## Starting a Fire

- *What do you do if there's snow on the ground?*
  - Build a fire on a platform of green logs or rocks.
- *What if the area's covered with dry grass?*
  - Clear a patch of bare dirt.
- Describe how to start a fire.
- *How do you make the fire smoke to send a signal?*
  - Use green or damp leaves.

## Signaling for Help

- *What's the international emergency sign for distress?*
  - Three repetitions of any signal, including three blasts on a whistle, three flashes with a mirror or three fires evenly spaced.
  - If you're near an open space, walk a large "X" in the snow, grass or sand.

## Water

- *How long can you last without water?*
  - About three days.
- *Is it safe to drink from clear mountain streams?*
  - No. They're often contaminated by *Giardia lamblia*, a parasite that causes serious intestinal illness.
  - Boiling is the best way to purify water.
  - Purifying tablets are another option.
  - Water filters can also be very effective

## Food

- *How long can you go without food?*
  - Two weeks or more.

## HYPOTHERMIA (TQ49)

- Hypothermia occurs when your body loses heat faster than it can produce it.
- *What conditions cause hypothermia?*
  - Cool, wet conditions, such as rain, snow, sleet or immersion in water.
  - Wind blowing on damp clothing.

## Preventing Hypothermia

- *How can you prevent hypothermia?*
  - Avoid dangerous weather conditions.
  - Dry out quickly when wet.
  - Eat high-calorie food.
  - Don't eat snow or ice.

## Symptoms of Hypothermia

- *What are the key symptoms of hypothermia?*
  - Shivering
  - Disorientation and slurred speech
  - Sleepiness and loss of consciousness

## Treatment of Hypothermia (TQ47)

- Find shelter
- Use a fire, blankets, or body heat to warm up.
- Remove wet clothing
- Drink warm liquids (no alcohol) and eat quick energy foods.
- Exercise will not help.

## Heat Exhaustion

The core body temperature increases, usually as a result of hot and humid conditions, plus a lack of water.

## Preventing Heat Exhaustion

- *How do you prevent heat exhaustion?*
  - Drink plenty of water and limit time in the sun if extremely hot
  - Take frequent breaks if you're hiking.
  - Dress in layers and shed layers as physical activity increases.
- *What are the symptoms of heat exhaustion?*
  - Pale and clammy skin
  - Weakness and nausea
  - Headache and muscle cramps

## Treatment of Heat Exhaustion

- Move to a cooler place and drink water.
- Fan yourself to lower body temperature but don't over-chill.

## Heat Stroke

- *Can heat stroke be fatal?* Yes, Should be treated as a medical emergency.

## **Symptoms of Heat Stroke**

- *What are the symptoms of heat stroke?*
  - Dry, hot and flushed skin.
  - Dilated pupils.
  - Slow, weak pulse.
  - Shallow breathing.
  - High temperature.

## **Treatment for Heat Stroke**

- Wrap in a sheet and soak with cool – not cold – water.
- Fan but don't over-chill.
- Get to a hospital immediately.

## **WRITTEN TEST**

**(80% required) – Alaska's current NBEF test**

## Proficiency Shoot & Blood Trailing Exercise

Archery shooting proficiency shall be demonstrated by the student taking eight shots at four 3-D targets. The student must make five out of the eight shots in the vitals (heart, lung, liver). **The student must make at least one vital shot on each of the four target animals and a double kill shot on one.** Students with disabilities will not be required to kneel. Flexibility in setting up the course is allowed to match big game in your area, but the yardages must be kept the same, e.g. an uphill shot at a mountain goat at Kodiak. The exact layouts will vary from location to location, but try to simulate the conditions as described below. The course shall be set up as follows:

**Target #1** - Deer or sheep preferably standing in trees

Station #1 - **19 yards**, kneeling, broadside, little or no obstruction

Station #2 - **18 yards**, standing, quartering away angle, shooting over low brush

**Target #2** - Elk, sheep, or goat in front of large tree

Station #3 - **21 yards**, kneeling, broadside from ground blind situation (low brush)

Station #4 - **26 yards**, standing, quartering away angle, clear shooting lane but small trees and branches close in to lane that help alter distance judgment

**Target #3** - Elk, sheep, or goat standing in a group of large trees

Station #5 - **26 yards**, standing broadside, brush or trees very near shooter's right shoulder (for right-handed shooters, opposite for left-handed shooters)

Station #6 - **20 yards**, kneeling, broadside, must pick a lane for a shot

**Target #4** - Black bear, target 12-15 feet below shooting position

Station #7 - **14 yards**, kneeling, broadside, no obstructions

Station #8 - **11 yards**, standing quartering away angle, over low brush. If shooting from an elevated stand the distance and angle may be the same for Stations #7 and #8

**Students shooting traditional and compound bows will be held to the same minimum standards.** These requirements are based on realistic distances that all archers would encounter in the field. The course also serves as a learning experience for all archers and hopefully will have an impact on their choice of equipment, amount of practice required and shots taken while in the field.

The blood trailing exercise is designed to emphasize the importance for bowhunters of understanding how to blood trail. For the blood trailing exercise use arrows (broken or to your liking), crisco on the shaft to simulate fat, fake blood, and some type of big game animal hair on ground and shaft.

**Paperwork to be turned in to HIT Administration:**

- Temporary Certification Forms from each student (white copy)
- Student Consent Form (from ALL students)
- Class Roster
- Instructor Course Report (include all volunteers and their hours)
- Written Test Answer Sheet
- Proficiency Shoot Card

