



INSTRUCTOR GUIDE

LESSON 3: INTRODUCTION TO BOWHUNTING EQUIPMENT

V.2/2018

Bowhunter Education 2017 Standards – Sections 2, 3, & 6 Objectives 6, 7, 9, 10, 11, & 27

Instructor Notes



This lesson introduces the students to bowhunting equipment. This lesson corresponds with Chapter 4 (pgs. 28-35) of the Today's Bowhunter student manual. Teach this lesson to the entire class.

Teaching Methods Used In This Lesson

- **Lecture**
- **Discussion**

This lesson includes the use of a PowerPoint slideshow (See Addendum A). Review the PowerPoint ahead of time and familiarize yourself with the functionality of the presentation. Certain slides present all information at once, while others reveal pieces of information at a time. This is intended to allow the students to see topics or questions while still hiding the additional information from view. This allows the instructor to use questioning techniques throughout the lecture.

Time Suggested



50 Minutes

**Materials
Required**



- Audio visual equipment (projector & screen)
- Compound bow
- Crossbow
- Laptop with PowerPoint software
- Long bow
- PowerPoint file: Lesson 3 - Introduction to Bowhunting Equipment
- Recurve bow

**Station
Set-up**



10 minutes

1. Set up projector, screen, and laptop and open the PowerPoint show.
2. This opens the show to Slide #1 – the Title slide should be displayed.
3. Place the bows on a table near the front of the room.

Note: While discussing the different bows, it would be beneficial to hold up to the class the different styles.

Vocabulary
Builder



Note: Do not read the vocabulary to the students. These are terms commonly used during this lesson, and the definitions are for instructor reference only.

Arm guard – A wrap around an archers bow arm that prevents the bowstring from slapping the archer's arm.

Arrow fletching – A feather or plastic vane glued onto the rear of the arrow shaft that causes the arrow to spin and stabilize the arrow in flight.

Arrow shaft – The body of the arrow, typically made with wood, fiberglass, aluminum, or carbon fiber.

Blunt tip – A tip of an arrow with a flat end used for shooting small game.

Bolt – A crossbow arrow consisting of a head, shaft, fletch, andnock.

Bowstring – The string of the bow which is pulled to engage the limbs and released to propel the arrow.

Bow stringer – A string used to flex the limbs of a traditional bow so that the bowstring can be put on the bow.

Broadhead – A tip of an arrow with razor sharp blades used for big game.

Cable – The strings of a compound bow or crossbow which link the cams.

Cable guard – A rod that extends back from the riser of a

compound bow that holds the cables out of the path of the arrow.

Cam – The mechanical wheel at the end of a compound bow's (or crossbows) limb.

Compound Bow – A bow with one or two cams mounted on the end of the limbs that allow faster speeds, greater energy, and let-off.

Crossbow – A bow with the limbs mounted horizontally on a shouldered stock and is fired like a firearm.

Dry-fire – Pulling a bowstring back and releasing it without having an arrow in the bow.

Expandable broad head – see Mechanical broad head.

Finger tab/glove – A piece of fabric used to shield the archer's fingers from the bowstring to allow a smooth release of the bowstring.

Fixed-blade broad head – A broad head typically used for big game with at least two permanent blades.

Fletching – Feathers or plastic vanes around the nock end of the arrow shaft that helps stabilize the flight of the arrow.

Flu-flu – An arrow with large fletching's to produce increased drag to limit the distance the arrow will fly. Generally used for aerial shooting.

Helical – Fletching's are glued on in a slight spiral pattern around the shaft.

Horizontal bow – A bow that is held horizontally while shooting (e.g. crossbow).

Judo point – A tip of an arrow used for shooting small game that consists of a blunt end with wires sticking out to the side.

Kisser button – A small piece of plastic that fits around the bowstring slightly above the nocking point that is placed at the corner of the shooter’s mouth upon drawing the bow back.

Let-off – A percentage that the draw-weight is reduced upon reaching full draw.

Long bow – A bow resembling a stick and string.

Mechanical broad head – A broad head typically used for big game with at least two blades that open upon impact with the target.

Mechanical release aid – A trigger device an archer uses instead of their fingers to draw and release the bowstring.

Nock – A slot in the end of an arrow that fits on the string.

Nocking point – The location on a bowstring where the arrow is connected.

Peep sight – A small piece of plastic or metal that is inserted into the bowstring above the nock to serve as a rear sight window.

Quiver – A container that may or may not be attached to the bow that stores the arrows and can cover broad heads securely.

Recurve bow – A bow resembling a stick and string with the limbs curved away from the archer.

Removable-blade broad head – A broad head typically used for big game with at least two replaceable blades.

Riser – The stiff frame of a bow that the limbs extend from.





Serving – A small diameter string that is wound tightly around the bowstring, typically where the arrow is nocked and where the bowstring meets the cams.

Target point / Bullet point / Field tip – A tip of an arrow used for shooting practice targets.

Traditional Bow – A longbow or recurve bow.

Vertical bow – A bow that is held vertically when shooting (e.g. compound, longbow, recurve).

LESSON PLAN

<p><u>PART A:</u></p> <p><u>Focus Activity</u></p>  <p>1 minute</p>	<div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"> <p>Note: This lesson uses PowerPoint extensively as a teaching aid. This “click” icon () is shown when the instructor should advance the PowerPoint. It is vital that you practice with the PowerPoint ahead of time so that you are familiar with the program and know how/when to navigate it properly. See Addendum A for a layout of the slides.</p> </div> <p>Slide #1 - The purpose of the focus activity is to get everyone’s attention focused on the lesson. Ask, “how many of you already own a bow?”</p>
<p><u>PART B:</u></p> <p><u>Objectives</u></p>  <p>1 minute</p>	<p> Slide #2 - State the learning objective to the students. “At the end of this lesson, you will be able to:</p> <ul style="list-style-type: none"> • identify common types of bows, components, and characteristics of each type; • identify and describe components of a finished arrow, uses of each component, and types of arrow points used in shooting/hunting; • describe the benefits of stated accessories; • list the common types of bowhunting injuries and how to prevent them; • describe how to properly inspect bows and arrows and use a quiver and a broad head wrench for safety; • And list the proper broad head/game point for game hunted.”

PART C:

Teaching
Method



46 minutes

1. 🖱️ Slide #3 – Introduce the types of bows
 - Longbow
 - Recurve bow
 - Compound bow
 - Crossbow
2. 🖱️ Slide #4 - Discuss the main characteristics of traditional bows (i.e. longbow and recurve), and highlight their differences:
 - Held vertically
 - Stick and string
 - the farther it is pulled, the heavier the draw
 - Typically shot with fingers
 - A recurve bow's limbs create more energy and force than an equivalent poundage long bow
3. 🖱️ Slide #5 - Discuss the main characteristics of the Compound bow:
 - Held vertically
 - Has cams and cables
 - Has let-off
 - Typically shot with a mechanical release aid
4. 🖱️ Slide #6 - Discuss the main characteristics of the Crossbow:
 - Held horizontally
 - May or may not have cams and cables
 - Sighted and fired like a firearm
5. 🖱️ Slide #7 – Describe the primary parts of vertical bows:
 - Grip
 - Riser
 - Limb
 - String

-
- Nocking location
 - Sight
 - Rest
 - Silencers

6. 🖐 Slide #8 – Describe the parts specific to compound bows:

- Cam
- Cable
- Stabilizer
- Wrist Loop
- Peep Sight
- D-loop

7. 🖐 Slide #9 – Describe the parts specific to crossbows:

- Cocking mechanism
- Sight
- Safety
- Trigger
- Stock and rail
- Foot stirrup

8. 🖐 Slide #10 – Transition into arrows by stating “No matter what type of bow is used, what truly makes it a bow is that the projectile it sends down range is an arrow or bolt.”

Identify the components of a finished arrow/bolt:

- Shaft
- Nock
- Fletching
- Tip

9. 🖐 Slide #11 – Describe the types of shafts:

- Wood
- Fiberglass
- Aluminum

- Carbon fiber
- Aluminum/carbon fiber

10. 🖱 Slide #12 – Describe styles of nocks:

- Notched wood
- Glue on
- Insert
- Crossbow specific

11. 🖱 Slide #13 – Describe the types and styles of fletching:

- Feathers
- Vanes
- Straight fletch
- Helical fletch
- Flu-flu



Note: When introducing the bowfishing spear tip below, do not go into depth on the process of bowfishing. In Massachusetts (and many other states) bowfishing requires a fishing license. Inform students that if they wish to get into bowfishing, they will need to look into it further.

12. 🖱 Slide #14 – Describe different tips, when each style is used, and what game would be hunted (if any) with each:

- Target points
 - field vs. bullet
- Small game head
 - judo point
 - blunt tip
 - bowfishing spear tip
- Broadhead
 - fixed-blade
 - removable-blade
 - mechanical

Note: Now is a good time to discuss the pros and cons of each broad head style and stress the importance of practicing with the chosen broad head to ensure the arrows still hit their mark.

13. Discuss the importance of razor sharp broad heads and how to prevent cuts to themselves and equipment
 - Use a quiver
 - Use a broad head wrench
14. 🖱 Slide #15 – Describe the benefits of other accessories and when and how to use them properly:
 - Mechanical release-aid
 - Finger tab/glove
 - Arm guard
 - Bow stringer
 - Quiver
15. 🖱 Slide #16 – Discuss the importance of inspecting equipment before and after each time shooting. Cover the following:
 - Cracks in bow limbs
 - Loose screws/bolts on the bow
 - Frayed strings
 - Dry-rotted peep tubing
 - Cracked or splintered arrows
 - Loose/damaged fletching's
 - Wax the bowstring
 - Rail lube on crossbow

<p><u>PART E:</u></p> <p><u>Student Summary</u></p>  <p>2 minutes</p>	<p>👉 Slide #17 - Ask students to recall the important topics that were covered in the lesson. It is important for students to be able to verbalize these points. Use questioning strategies to flesh out answers.</p> <ul style="list-style-type: none"> • What are the four types of bows? • What are the four components of a finished arrow? • What is the difference between a fixed-blade broad head and a mechanical broad head? • What accessory do archers use to prevent the bowstring from slapping their arm/clothing? <p>END OF LESSON</p>
<p><u>Additional Instructor Notes</u></p> 	<p>During this lesson, it is very easy to go into excessive detail about things like draw weight, draw length, and arrow spine. Remember that these topics will be covered in lesson 6.</p>

Addendum

A



POWERPOINT SLIDES



Introduction to Bowhunting Equipment

#1 -

Objectives

At the end of this lesson, you will be able to:

- identify common types of bows, components, and characteristics of each type;
- identify and describe components of a finished arrow, uses of each component, and types of arrow points used in shooting/hunting;
- describe the benefits of stated accessories;
- list the common types of bowhunting injuries and how to prevent them;
- describe how to properly inspect bows and arrows and use a quiver and a broadhead wrench for safety;
- and list the proper broadhead/game point for game hunted.

#2 -

MASSWILDLIFE

Bows

- Traditional bows
 - Longbow
 - Recurve bow
- Compound bow
- Crossbow



#3 -

MASSWILDLIFE

Traditional Bows



Longbow



Recurve

#4 -

MASSWILDLIFE

Compound Bows



#5 -

MASSWILDLIFE

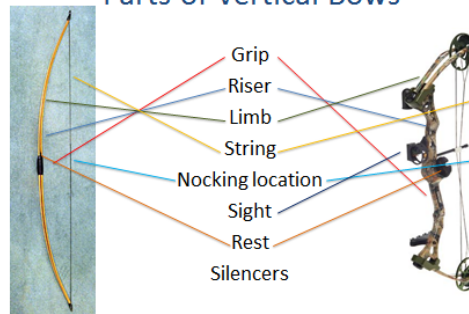
Crossbows



#6 -

MASSWILDLIFE

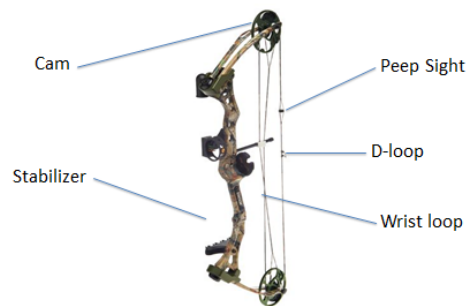
Parts of Vertical Bows



#7 -

MASSWILDLIFE

Parts of Compound Bows



#8 -

MASSWILDLIFE

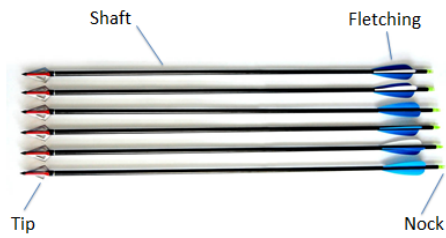
Parts of Crossbows



#9 -

MASSWILDLIFE

Arrows



#10 -

MASSWILDLIFE

Arrow Shafts

- Wood
- Fiberglass
- Aluminum
- Carbon
- Carbon/Aluminum combo



#11 -

MASSWILDLIFE

Arrow Nocks



#12 -

MASSWILDLIFE

Arrow Fletching

Feathers



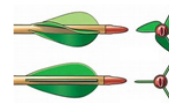
Vanes



Flu-flu



Straight vs. Helical



#13 -

MASSWILDLIFE

Arrow Tips

Target Points



Small Game Heads



Broadheads



Fixed Blade



Replaceable Blade



Mechanical/Expandable

#14 -

MASSWILDLIFE

Accessories



Mechanical Release-aid



Finger Tab/Glove



Arm Guard



Bow Stringer



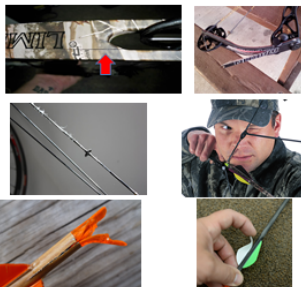
Quiver

#15 -

MASSWILDLIFE

Inspect Equipment

- Cracked bow limbs
- Loose screws
- Frayed strings
- Dry-rotted peep tube
- Cracked arrows/nocks
- Damaged fletchings



#16 -

MASSWILDLIFE

Summary

- What are the four types of bows?
- What are the four components of a finished arrow?
- What is the difference between a fixed-blade broadhead and a mechanical broadhead?
- What accessory do archers use to prevent the bowstring from slapping their arm?

#17 -

MASSWILDLIFE

Addendum

B



FREQUENTLY ASKED QUESTIONS

1. What type of broad head is best?
The answer to this question really is based on personal preference. Be careful not to push certain brands when answering. Each type of broad head (or small game head) has its pros and cons. Draw on your experience to discuss these pros and cons.
2. What brand of bow is best?
Refrain from endorsing or rejecting any brand. Everyone has their own opinion as to what is best. Rather, explain to the students that the best bow is what they are comfortable shooting, and what they can shoot well consistently. Express that a certain type of bow, or a certain brand of bow, is only as effective as its user.
3. Do people ever use sights or other accessories on traditional bows?
Yes, there are traditional bows available that are made to accept modern conveniences. There are also different shooting techniques (e.g. walking the string, changing anchor point) that a user can employ to aid in aiming a traditional bow.
4. Why aren't crossbows legal in Massachusetts?
By Massachusetts statute (MGL 131 s69), crossbows are not a legal means of hunting unless the hunter is permanently disabled to the point that they can't draw a conventional bow. To change a law requires an act of legislature. If individuals wish to have this law changed, they need to contact their state representatives.

