



Identifying Hunting Equipment

Unit: Animal Wildlife Management

Problem Area: Safety and Ethics

Lesson: Identifying Hunting Equipment

- **Student Learning Objectives.** Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify primitive hunting devices.**
- 2 Identify modern firearms.**
- 3 Describe ammunition and how it works.**
- 4 Discuss handgun selection.**

- **List of Resources.** The following resources may be useful in teaching this lesson:

Camp, William G., and Thomas B. Daugherty. *Managing Our Natural Resources*, Fourth Edition. Albany, NY: Delmar Publishers, 2002.

Deal, Kevin. *Wildlife and Natural Resource Management*, Second Edition. Albany, NY: Delmar Publishers, 2003.

Lee, Jasper S. *Natural Resources and Environmental Technology*, Second Edition. Upper Saddle River, NJ: Prentice Hall Interstate, 2006.

Stutzenbaker, Charles D., et. al. *Wildlife Management: Science & Technology*, Second Edition. Upper Saddle River, NJ: Prentice Hall Interstate, 2003.

- **List of Equipment, Tools, Supplies, and Facilities**

- ✓ Writing surface
- ✓ Overhead projector
- ✓ Transparencies from attached masters
- ✓ Copies of student lab sheets

■ **Terms.** The following terms are presented in this lesson (shown in bold italics):

- ▶ ammunition
- ▶ bowhunting
- ▶ broadhead
- ▶ caliber
- ▶ cartridge
- ▶ centerfire
- ▶ cylinder
- ▶ gauge
- ▶ magazine
- ▶ muzzleloader
- ▶ primer
- ▶ primitive hunting device
- ▶ quiver
- ▶ recoil
- ▶ rifle
- ▶ rimfire
- ▶ shell
- ▶ shot
- ▶ shotgun

■ **Interest Approach.** Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Have students assume they are going hunting. Ask them to tell where they would go, the species they would hunt and the hunting equipment they would take along. Have students describe why they need the equipment. You may also bring in pictures of different gun calibers or gauges. Have students study them closely. Ask them if they can identify the parts. Move from the interest approach into the objectives and anticipated problems for the lesson.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

Objective 1: Identify primitive hunting devices.

Anticipated Problem: What are primitive hunting devices?

- I. A **primitive hunting device** is a device with less power and, hence, less capacity to kill. Using these devices is sometimes called specialty hunting.
 - A. Before firearms were developed, there were bows and arrows.
 1. Recently, bowhunting has increased in popularity. **Bowhunting** is using a bow to propel an arrow in order to harvest game. The bow has a string that is stretched tightly to propel the arrow into the game.
 2. Bowhunting requires practice and commitment to safely learn what is involved.
 3. The basic equipment needed for bowhunting includes: a bow, arrows, a quiver, a spare bowstring, proper clothing, finger and hand protection, and a license.
 4. The different types of bows that are available are a straight limb or long bow, recurve, and a compound bow.
 5. The tip on an arrow is known as a **broadhead**. The same kind of broadhead should be used when practicing as when hunting. The **quiver** is the container in which the arrows are carried. It should cover the broadhead securely.
 6. The seven basic steps in shooting a bow and arrow are: position, nocking, drawing, aiming, holding, releasing, and follow-through.
 - B. Some 600 years ago, muzzleloaders were used in Europe as the first firearms shot from the shoulder. American improvements made the muzzleloader more accurate today.
 1. A **muzzleloader** is a firearm that is loaded through the barrel (muzzle) instead of the breech.
 2. Hunting with a muzzleloader is challenging because only one round can be fired from the gun at a time. This takes time because it has to be reloaded and the animal may escape.
 3. There should be safe instruction and practice before hunting with a muzzleloader.

Many techniques can be used here to help students master this objective. Students can use the suggested resources to aid in understanding this material. Use TM–A (top) to illustrate the major parts of a long bow and TM–A (bottom) to illustrate the major parts of an arrow. Have a local resource person demonstrate the selection, care, and proper use of a bow and arrow.

Objective 2: Identify modern firearms.

Anticipated Problem: What are modern firearms?

- II. During the second half of the 1800's, there were many improvements made that modernized the muzzleloader. Smooth-bore and rifle-bore firearms were developed.
 - A. The smooth-bore firearms are known as shotguns.
 1. A **shotgun** is a firearm that fires several small pellets in a pattern at a target.
 2. A shotgun can be an all-purpose firearm used for targets or many types of hunting, such as quail, dove, squirrel, and deer.
 3. A shotgun fires pellets or a solid lead projectile called a slug.
 4. The size of the bore is known as **gauge** or caliber. It is measured by the number of lead balls equal in diameter to the size of the bore, which together weigh one pound. Common gun gauge sizes are 10, 12, 16, 20, 28, and .410.
 5. Shotguns can have several types of actions. Four common choices are break action, bolt action, pump action (or slide), and semiautomatic.
 - B. The rifle-bore firearms are known as rifles.
 1. A **rifle** is a firearm with a spiral or rifle bore inside and fire one shot from a cartridge at a time. The spiral bore causes the bullet to spin when it goes through the barrel. (A spinning bullet goes farther and straighter.)
 2. The measurement of a rifle is known as **caliber**. Caliber is reported as millimeters or hundredths of an inch. The most popular caliber rifles are the .22, .270, 30.06, and 6mm.
 3. Some rifles have features that allow several firings in rapid succession. Such features are described as a repeater or automatic rifle. Cartridges are stored in the magazine of a repeating rifle. A **magazine** is the part of the repeating firearm that holds ammunition until it is ready to be fed into the chamber.
 4. Responsible hunters should know the parts of a rifle and how they work. This helps hunters in handling firearms safely.

Many techniques can be used here to help students master this objective. Students can use the suggested resources to aid in understanding this material. Use TM-B (top) to illustrate the major parts of a shotgun. Use TM-B (bottom) to illustrate the major parts of a rifle. You can also use LS-A to help students identify parts of a gun and how they work.

Objective 3: Describe ammunition and how it works.

Anticipated Problem: What is ammunition? How does it work?

- III. **Ammunition** is any powder, shot, cartridge, or shell used in a firearm.
- A. In 1884, smokeless powder was developed (from the previous black powder) and is still used in today's shells and cartridges.
1. A **shell** is the container that holds the shot, powder, and other parts needed in the ammunition of shotguns. Some people reload shells as a form of recycling.
 2. A **shot** is a pellet of steel, lead, or other material used in shotgun shells. Shot size is determined on the diameter of the pellet. Buckshots are the largest pellets, ranging from size 4 to 00.
 3. Shotgun ammunition has five parts: a case, primer, powder, wad, and projectile or shot.
 4. Ammunition manufactured for a rifle is known as a **cartridge** or round. Cartridge size depends on the bore of the rifle. Cartridges can be manufactured as centerfired or rimfired. Large caliber rifles and all shotguns use **centerfire** ammunition where the primer is in the center of the cartridge base. **Rimfire** ammunition features a primer around the cartridge rim.
 5. Modern rifle and pistol ammunition has four parts: the case, primer, powder, and projectile. All are contained in a cartridge.
- B. How does ammunition work?
1. The trigger releases the hammer.
 2. The hammer drives a firing pin into the primer area.
 3. The **primer** explodes; this sets fire to the powder.
 4. This fire causes very high gas pressure.
 5. The gas pressure pushes the bullet or shot out of the firearm barrel.
- C. Safe, responsible hunters use the correct ammunition for their firearms.
1. The caliber or gauge is stamped on the barrel of most modern firearms. It is also printed on every box of ammunition. Only the exact matching caliber or gauge ammunition should be used in the appropriate gun.
 2. The size of load should be checked for the game on which you plan to hunt. Improper or incorrect ammunition can destroy a gun and cause serious injury.
 3. Always know your target and what is behind it. Modern shotguns can shoot the length of a football field, while some shotguns can shoot 3 miles!

Many techniques can be used here to help students master this objective. Students can use the suggested resources to aid in understanding this material. Use TM-C (top) to illustrate the major parts of a shotgun shell. Use TM-C (bottom) to illustrate the major parts of rimfire and centerfire cartridges.

Objective 4: Discuss handgun selection.

Anticipated Problem: What are some basics of handgun selection?

- IV. Handgun hunting is only for experienced hunters because they are small and easy to point in a different direction.
 - A. When selecting a pistol or revolver, know that the size of the grip must fit your hand as well as the size and weight.
 1. Always be aware of the recoil—especially of larger caliber handguns. The **recoil** is the kickback of a firearm when fired.
 2. A handgun has three major parts: the frame, barrel, and action. Revolvers have a cylinder; semiautomatics have a magazine that holds the ammunition. The **cylinder** is the rotating part of a revolver that contains five or more chambers.
 3. Handguns should be kept clean and cared for regularly. Responsible hunters should obey all laws and regulations with handguns.

Some techniques are included here to help students master this objective. Use brochures and other publications as a foundation of handgun selection and marksmanship and to illustrate handgun selection. You can use LS-A to help students identify parts of a gun and how they work.

- **Review/Summary.** Focus the review and summary of the lesson on the student learning objectives. Have student explain the content associated with each objective. Use firearm and hunting equipment transparencies and diagrams for students to use in demonstrating their knowledge of the objectives. Use student responses as the basis for reteaching. Questions at the end of the chapter in the textbooks and in the activity manuals may be used in the review/summary process.
- **Application.** Application can involve the following activity using the attached lab sheet:
 - ◆ LS-A: How Does Ammunition Work?
- **Evaluation.** Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activities. A sample written test is attached.
- **Answers to Sample Test:**

Part One: Matching

1=b, 2=j, 3=c, 4=e, 5=h, 6=a, 7=f, 8=i, 9=d, 10=g

Part Two: Completion

1. broadhead
2. muzzleloader
3. cartridge
4. quiver
5. primer

Part Three: Short Answer

1. The seven basic steps in shooting with a bow and arrow are position, nocking, drawing, aiming, holding, releasing, and follow-through.
2. Centerfire is a type of ammunition in which the primer is in the center of the base of the cartridge. Rimfire is a type of ammunition in which the primer is around the inside bottom rim of the case.

Identifying Hunting Equipment

▶ Part One: Matching

Instructions. Match the term with the correct response. Write the letter of the term by the definition.

- | | | |
|-----------------------------|------------|----------|
| a. ammunition | e. recoil | i. rifle |
| b. bowhunting | f. shell | |
| c. broadhead | g. shot | |
| d. primitive hunting device | h. shotgun | |

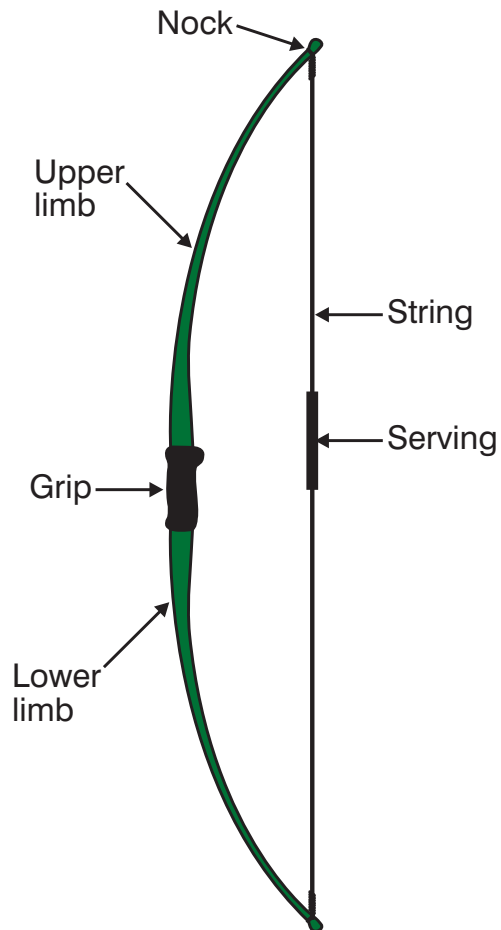
- _____ 1. Hunting with a bow and arrow.
- _____ 2. The part of the repeating firearm that holds ammunition until it is ready to be fed into the chamber.
- _____ 3. An arrowhead with two or more razor sharp cutting edges used in hunting.
- _____ 4. The kickback of a firearm when fired.
- _____ 5. A firearm that fires several small pellets in a pattern at a target.
- _____ 6. Any powder, shot, cartridge, or shell used in a firearm.
- _____ 7. The container that holds the shot, powder, and other parts needed in the ammunition of shotguns.
- _____ 8. A firearm with a spiral or rifle bore inside the barrel.
- _____ 9. A device with less power and, hence, less capacity to kill.
- _____ 10. Pellets commonly made of lead, steel, tungsten, iron, or bismuth that are fired by a firearm.

▶ Part Two: Completion

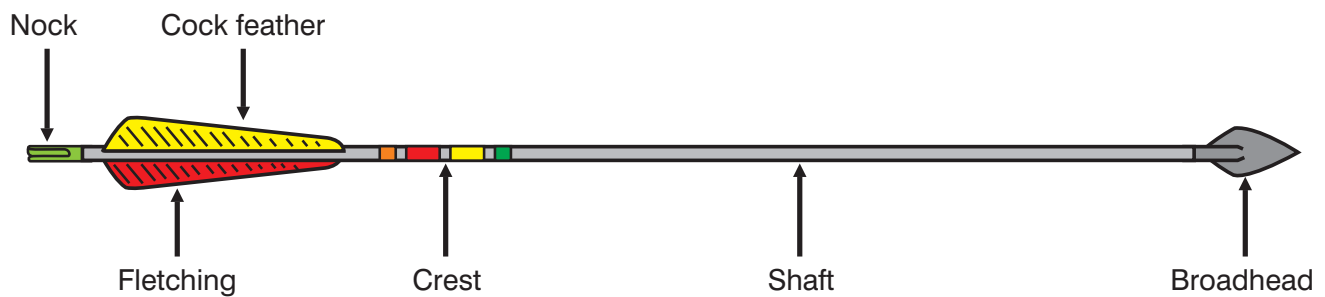
Instructions. Provide the word or words to complete the following statements.

1. The tip on an arrow is known as a _____.
2. A _____ is a firearm that is loaded through the barrel (muzzle).
3. Ammunition manufactured for a rifle is known as a _____.
4. The _____ is the container in which the arrows are carried.
5. A _____ is a cap that sets fire to the powder when it is struck by the firing pin.

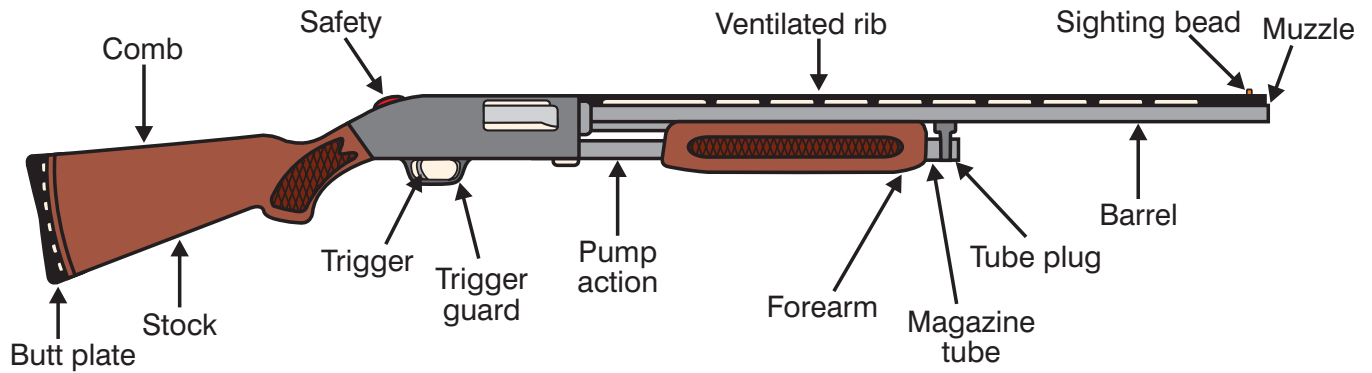
PARTS OF A LONG BOW



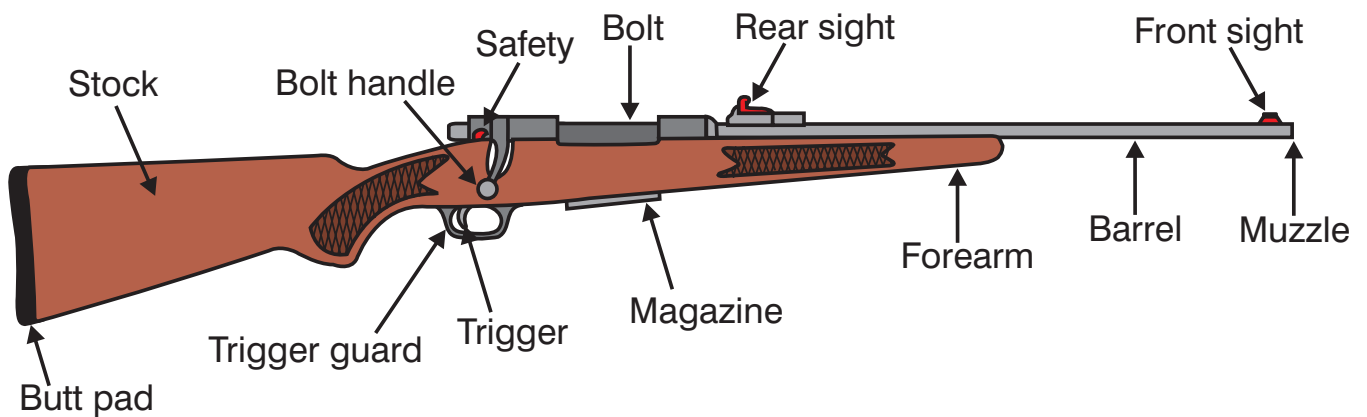
PARTS OF AN ARROW



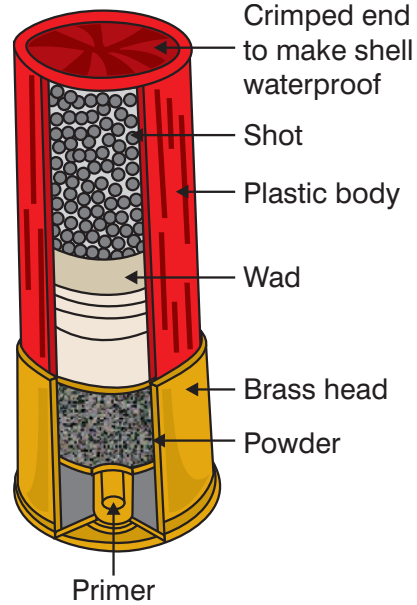
PARTS OF A SHOTGUN



MAJOR PARTS OF A BOLT ACTION RIFLE



PARTS OF A SHOTGUN SHELL



PARTS OF A CARTRIDGE

