DEPARTMENT OF NATURAL RESOURCES

Hunter Education and Firearms Safety Manual

Message to the Parents

Minnesota Hunter Education Program

Firearms safety in general is largely a matter of education, and home firearms safety is certainly no exception. All family members must learn safe firearm handling. Without proper education, preventive measures are nearly useless.

Children are never too young to begin the lessons of safety. Teaching can begin long before children are old enough to understand detailed instruction. Start by setting a proper and consistent example. If parents treat firearms with care and respect, children will likely follow their lead.

Children should learn that firearms are not toys. Having noticed adult interest in firearms, children will naturally develop a healthy curiosity about their use and operation. In addition, children tend to have an entirely unrealistic idea of what firearms are all about because of exposure to modern realistic toys and to the fantasies of television.

It is a serious mistake to assume that keeping children ignorant will prevent accidents. Nothing could be further from the truth. Where firearms are concerned, there is no such thing as blissful ignorance.

Keeping children in the dark only ensures that they will not understand the potential danger and increases the likelihood that they will seek to satisfy their curiosity without proper supervision. Also, the hazards that the parent wishes to eliminate are greatly increased if the child does not know how firearms function.

A good rule for children is hands off until they are old enough to be taught safe firearm handling, and then only in the presence of an adult – never while playing with other children.

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Chapter 1

Introduction

Minnesota Hunter Education Program

Welcome to Hunter Education!

Objective 1

- Identify the purpose and importance of hunter education

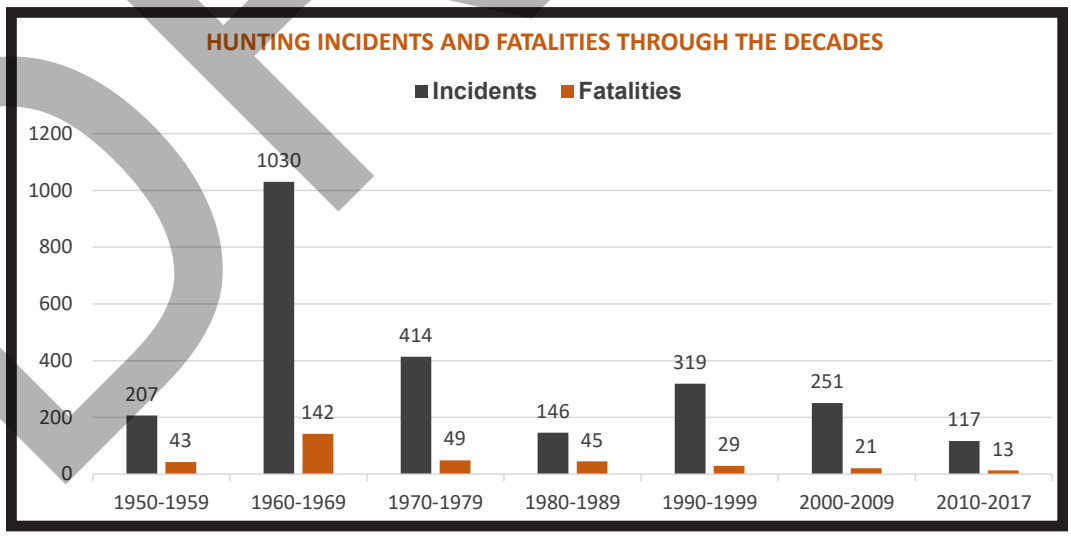
Why is hunter education important?

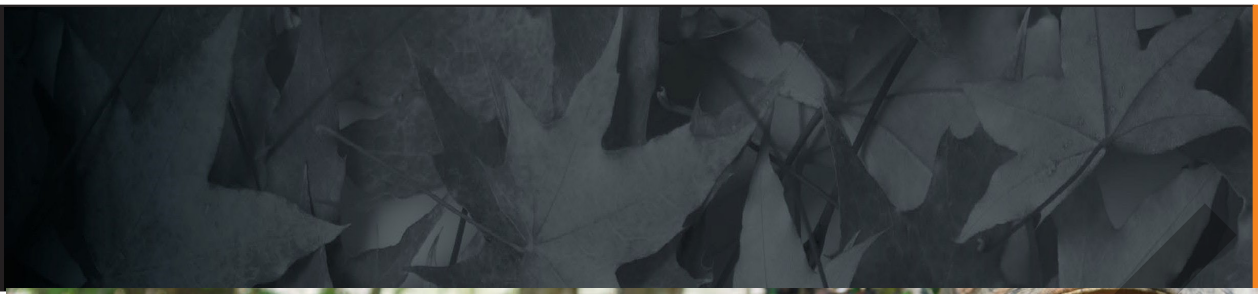
Hunter education training provides an understanding of the responsibilities involved in the sport of hunting to both the beginner and veteran hunter. It will help develop an understanding of sound safety practices, serve as a foundation for responsible and ethical decision making, and start hunters on the path to fully experience all aspects of the hunting tradition and pass this heritage on to the next generation.

Hunter education is important because it improves hunter behavior and reduces hunting-related injuries and fatalities. Hunting-related injuries and fatalities in Minnesota have decreased drastically since the introduction of the Minnesota Hunter Education Program.

Hunter education is not just a firearms safety course. It provides sound guidelines for becoming responsible, ethical hunters. It also helps increase awareness of the importance of wildlife conservation and management efforts in Minnesota. Hunter education covers a variety of topics including hunter responsibility, wildlife conservation and management, firearms safety and familiarization, wildlife identification and game care, personal preparedness, archery hunting and more.

Hunting in Minnesota is an important component of Minnesota's outdoor heritage. Our commitment to wildlife conservation and management consists of techniques that help preserve and conserve valuable wildlife and habitat, with the help of both hunters and the non-hunting public. It is up to you to be a safe, legal and responsible hunter and thereby help ensure Minnesota's hunting heritage.





The International Hunter Education Association (IHEA) has established numerous hunter education standards and objectives that are put in use by many states and provinces to provide firearms safety and hunter education training. The goal of hunter education is to train safe, responsible and law-abiding hunters. Since the mid 1950's, Minnesota has based its own hunter safety and firearms education program on the goals and standards of the International Hunter Education Association. These goals focus on performance-based learning objectives related to safe, legal and responsible hunting. It has been recognized throughout the decades that hunter education has been studied and determined to decrease hunting-related incidents.

This course will focus on a responsible hunter with topics including personal responsibility and ethical behavior, hunter best practices, safe firearms handling, responsibility to wildlife, a hunter's role in conservation and key wildlife management principles.

INTERNATIONAL HUNTER EDUCATION ASSOCIATION
IHEA-USA
Responsible Hunting

The goal of hunter education is to train safe, responsible and law abiding hunters.

Hunter education is important because it:

- decreases hunting-related shooting incidents and other hunting injuries
- promotes responsible hunter behavior, including compliance with hunting laws and regulations

History of Hunter Education

Objective 2

- Understanding Minnesota's firearms safety and hunter education history

The history of the Minnesota hunter education program began when the Department of Natural Resources (DNR) conducted the first firearms safety class in 1955. The class was started in response to concerns over too many hunting injuries and fatalities. An independent study was conducted in 1954 to examine the 130 accidental shooting incidents that had occurred during the previous years' hunting season. It was determined that a majority of the incidents were due to hunter inexperience.

Firearms safety classes originally started as a way to promote safe firearms handling. The course has evolved over the years to include more attention to hunter conduct, attitudes and ethics. The curriculum, along with the addition of blaze orange laws, has greatly contributed to a steady decline in both fatal and non-fatal firearms accidents.

1858 – Minnesota becomes the 32nd State

1887 – The first Game Warden is appointed

1890 – Local law enforcement agencies are given fish and game authority

1900 – There are 87 deputy game wardens in the state

1936 – A total of 145 game wardens are in the field

1955 – The Firearms Safety Program was established

1965 – A special December archery deer season is established

1966 – Firearms deer sales reach 300,000

1973 - Bright red clothing required to be worn for hunting seasons

1977 – Minnesota holds its first muzzleloader season with more than 100,000 hunters.

1981 – Turn in Poachers (TIP) program was created

1986 – Firearms deer license sales top 400,000

1987 – The Division of Enforcement celebrates 100 years of service

1990 – Anyone born after December 31, 1979 must complete Firearms Safety Hunter Education

1993 - Blaze Orange is required for hunting seasons

1999 – There are 149 field stations staffed by 132 field officers

2008 – One million students certified in Firearms Safety Hunter Education

2010 - Minnesota adds an online option with a one day field day as a way to take Hunter Education

2017 - Blaze Pink allowed along with Blaze Orange for small and big game hunting seasons

Chapter 2

Firearms

Minnesota Hunter Education Program

Types of Firearms and Parts

Objective 1

- Identify the basic parts of a firearm and state their purposes
- Describe the characteristics of rifles, shotguns and handguns

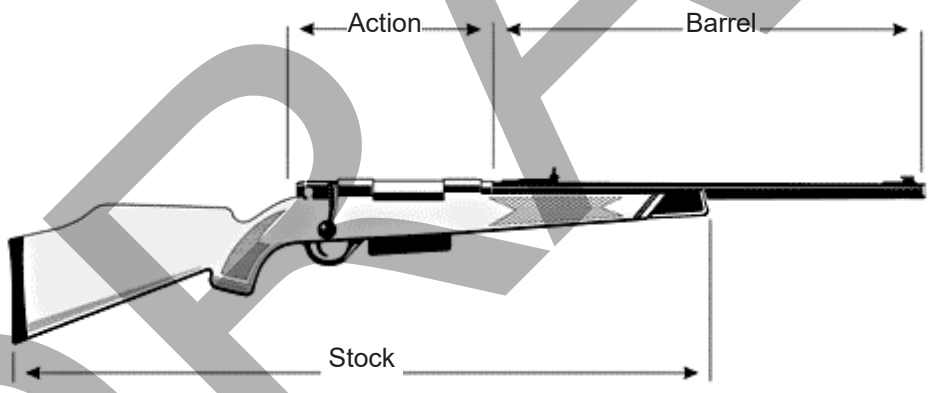
Definition of a firearm: A firearm is a tool designed to fire a projectile by the action of an explosive. Common firearms are divided into 3 main groups, rifles, shotguns, and handguns.

The 3 main parts of Rifles and Shotguns

Action: Loads and fires ammunition. Ejects the spent case.

Barrel: The part of a firearm through which a projectile or shot charge travels under pressure from burning gunpowder, compressed air or other like means. A barrel may be either rifled or smooth. The barrel guides the projectile in the direction it is pointed.

Stock: Serves as a platform for supporting the action and barrel and is the part of the firearm held by the shooter. Some firearms have pistol grips that are separate from the stock that can also be held by the shooter.



Other parts of a Rifle

Trigger: Allows the shooter to initiate the shot by pressing it rearward.

Trigger Guard: Protects the trigger from unintended movement.

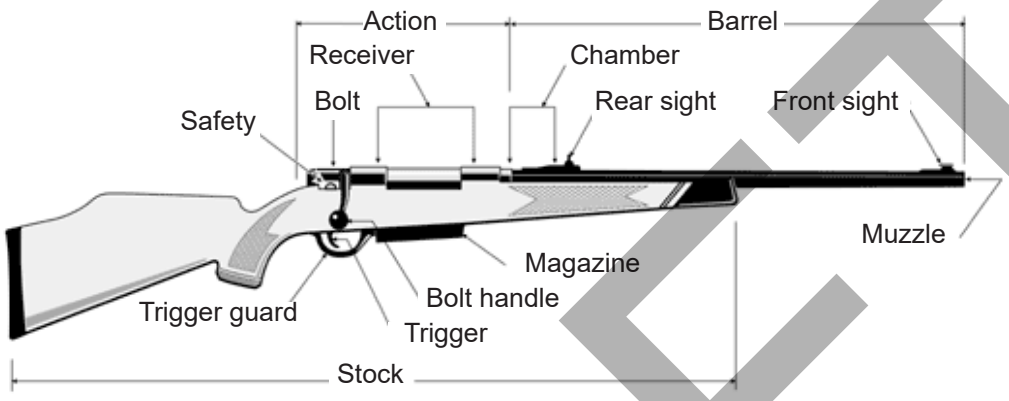
Sights: Allow precise alignment of the firearm in relation to the target.

Safety: A mechanical device that is designed to block the trigger and prevent the firearm from firing. A safety does not necessarily block the gun's firing mechanism.

Magazine: A magazine is where the ammunition is stored in a firearm. A magazine can be internal, external (detachable box magazine) or sometimes in a tube located underneath the barrel.

Chamber: The part of the firearms barrel that supports the cartridge and is cut to the specific dimensions of the cartridge the firearm is chambered for (check your barrel stamp).

Receiver: The part of the firearm the barrel connects to as well as the trigger components.



Focus on the safety

A safety is the most important part of the firearm. Its purpose is to prevent the trigger, or the firing pin, from moving and thereby preventing the firearm from firing. The safety can be located in different locations on different firearms. A careful hunter always knows where the safety is located on the firearm before loading and firing. A safe hunter never takes the safety off until they are ready to pull the trigger.

However, a safety is a mechanical device. It can fail! Just because you have the safety on doesn't mean the firearm won't fire. Safeties should never be used as a substitute for safe firearm handling and the observance of all firearm safety rules.

Here are some examples of different locations of safeties:

Semi-automatic safety

Break action safety

Break action safety (top view)

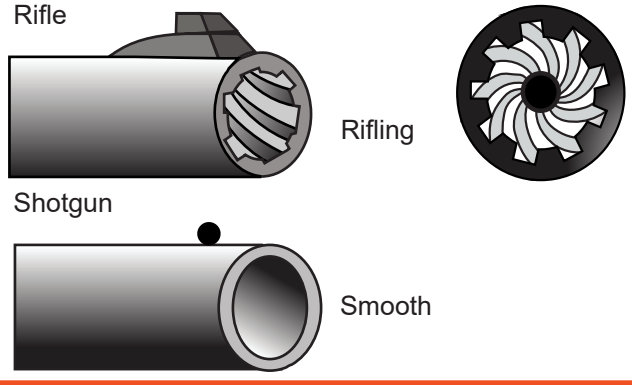
Pump action safety

Bolt action safety

Rifles and Shotguns

While rifles and shotguns may have similarities and often look alike, the difference is the purpose and the barrel. Rifles are primarily designed to shoot single bullets which strike a single, usually stationary target, while shotguns are designed to fire a spread of shot or pellets in order to hit a moving target.

The main difference between rifles and shotguns is the inside of the barrel. Rifles are grooved in a spiral pattern while the inside of most shotgun barrels are smooth.



Firearms: Action Types

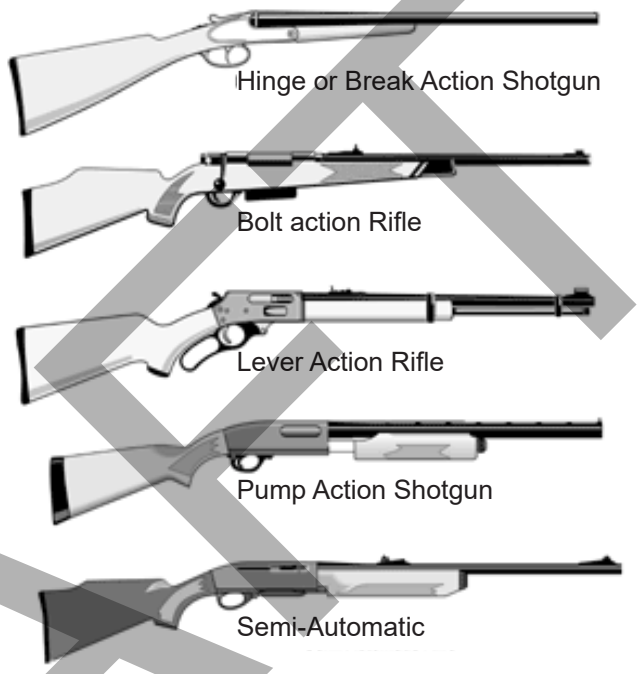
Objective 2

- Identify common types of modern firearm actions.

While each firearm has different characteristics, all firearms work using the same basic principals. All firearms, except for muzzleloaders have an action.

The firearm action loads, locks, fires and ejects the cartridge or shell. The firing sequence is similar for each firearm; the trigger is pulled, causing a firing pin to strike the primer; the primer ignites the gunpowder and the burning powder creates pressure; the pressure pushes the projectile (shot or a bullet) down the barrel and out the muzzle, or end of the barrel.

There are five basic firearm action types.



Action sequence of a pump shotgun

Hinge or Break Away

One of the simplest firearm actions is the break action. The action release on a break action firearm is usually on the top of the firearm behind the chamber.
To load a break action firearm, simply open the action using the action release, insert the ammunition into the chamber, and close the action. After firing the firearm, open the action using the action release and remove the spent ammunition manually. Some break actions will automatically eject the shells when opened.

Bolt Action

The bolt action is most often seen in rifles. Bolt action firearms are common and simple to use. Opening a bolt action firearm is as simple as pivoting the bolt handle upwards and pulling it backwards, using the handle on the bolt. Bolt action rifles are known for their accuracy and reliability. Malfunctions are extremely rare in bolt-action firearms.

Lever Action

A lever-action uses a lever located around the trigger guard area, often including the trigger guard itself, to load, fire and eject cartridges. The lever action is most commonly seen in rifles. Most lever-actions do not have any mechanical safeties. They are popular for short- and medium-range hunting in heavily covered areas due to their short length.

Pump

The pump Action is more commonly seen in shotguns than in any other type of firearm. It is a very reliable action, and an experienced shooter can go through the pumping actions very quickly, and instinctively. Sliding the front grip back and then forward ejects the spent shell, loads another shell.

Semi-Automatic

A semi-automatic fires a bullet, ejects the spent cartridge and chambers a fresh cartridge each time the trigger is pulled. The semi-automatic action is very popular in both rifles and shotguns.

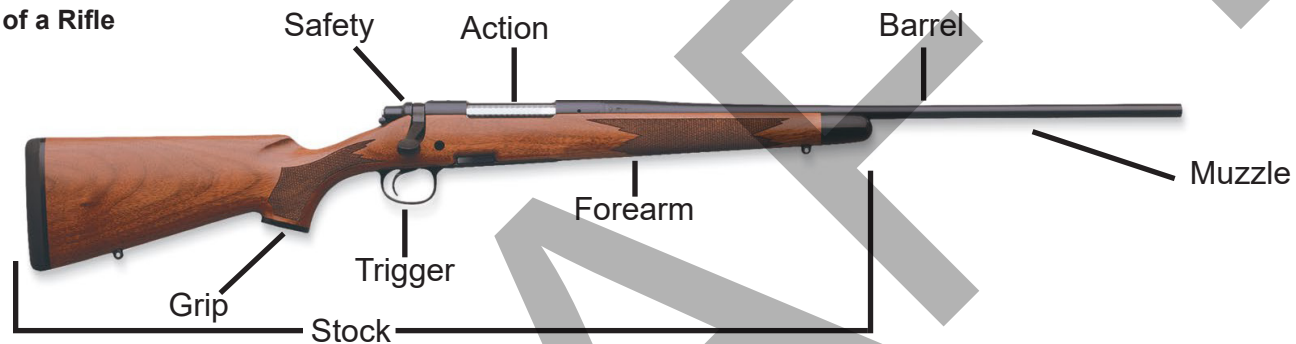
Firearms: Rifles and Rifle ammunition

Objective 3

- Describe the parts and functions of a rifle
- Match ammunition to the respective caliber of a firearm

Rifles are firearms designed to accurately hit a precise point and typically at long distances. They are typically long-barreled firearms with grooves cut into the barrel of the rifle. These grooves are called rifling and give rifles their name. The rifling makes the bullet spin as it leaves the muzzle (think of throwing a football), making the projectile much more accurate and stable in flight. Make sure the ammunition you use matches the cartridge that is stamped on the side of the barrel.

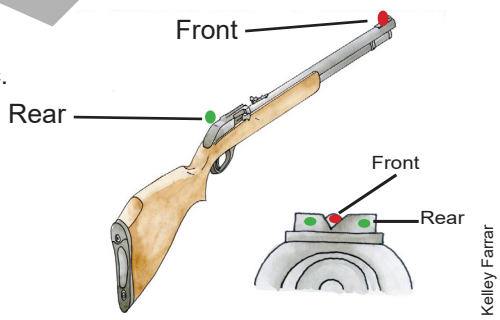
Parts of a Rifle



There are three main types of sights for rifles – open, aperture and telescopic.

Open sights

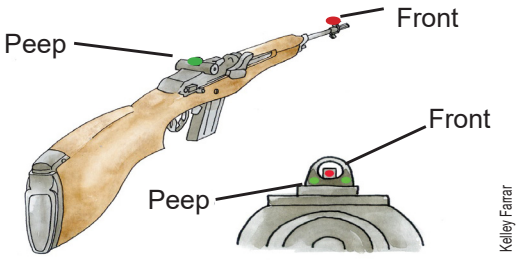
Open sights are composed of a post or bead at the muzzle end of the barrel and a blade with a V shape near the action. The spot you want to hit on the target should be lined up so that it appears to sit on top of the post. The post should be lined up with the top of the V notch.



Kelley Farrar

Aperture sights

Aperture sights are also known as peep sights. Firearms with aperture sights will have a post at the muzzle end of the barrel and an aperture or hole at the rear sight. The spot you want to hit on the target should be lined up so that it appears to set on top of the post. The top of the post should appear to be in the middle of the hole.

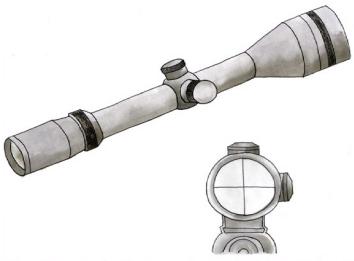


Kelley Farrar

Telescopic

Telescopic sights are also known as scopes. Scopes come in many styles, but the most common has crosshairs that are lined up with the target. The main advantage of telescopic sights is that they make your sights and target appear on the same level. This means that you can keep both the target and cross-hairs in focus. Using scopes does not mean you do not need to spend time practicing with your firearm. Never use a rifle scope in place of binoculars.

A rifle should only be aimed at the identified target that you plan to shoot.

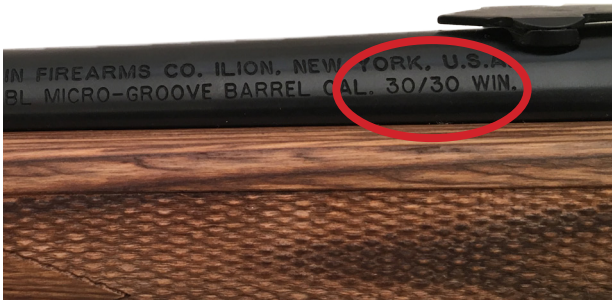

Kelley Farrar

Matching ammunition is a very important part of using firearms. Failing to match the correct ammunition with the firearm could lead to a catastrophic failure of the firearm or serious injury to the user.

The barrel stamp should tell you the correct ammunition to use, including the gauge and length of the ammunition. In rifles and handguns the ammunition is called a cartridge. In a shotgun, the ammunition is called a shot-shell, or just "shell". The barrel stamp is located on the barrel of the firearm.

On the ammunition, the stamp is called a headstamp. You should always make sure to use the correct ammunition for the firearm you are using. The ammunition box will also show the type of ammunition. It is important to always put the correct ammunition back in the correct box to ensure the wrong ammunition does get used.

The following pictures show the barrel stamp for rifle, the matching box of ammunition and the matching headstamp on the cartridge.

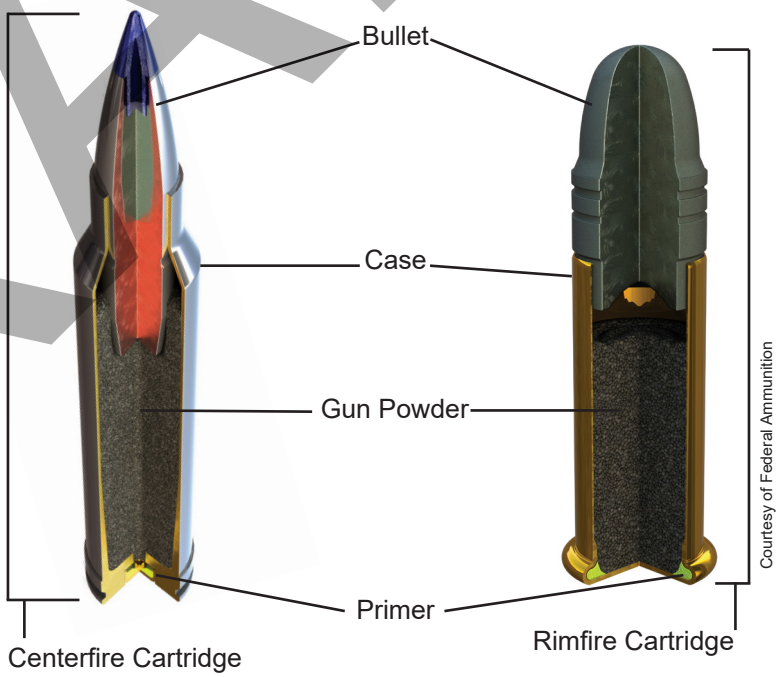


Caliber (diameter of the bullet) Caliber

Caliber or Cartridge?

People often use the term "caliber" when they are really talking about a particular "cartridge". A cartridge consists of a case, primer, gun powder, and a bullet. The caliber of a rifle refers to the diameter of the bullet fired.

EXAMPLE: A .300 Blackout, .308 Winchester, .30-06 Springfield, .300 Winchester Magnum, and 300 Norma Magnum are all .30 caliber rifles that can fire the same bullet but are very different cartridges.



Centerfire vs. Rimfire Cartridges

The difference between a rimfire and centerfire cartridge is the location of the primer. Centerfire cartridges have the primer in the center of the bottom of the cartridge. These cartridges are usually more powerful than rimfire cartridges and are used in larger caliber firearms. Rimfire cartridges have the primer material "spun" into the edges of the rim of the cartridge and are usually used in smaller caliber firearms.

Cartridge Parts:

Case: metal cylinder that houses the components of rifle and pistol ammunition

Primer: a percussion compound that ignites the gunpowder

Gunpowder: explosive substance that burns and creates pressure forcing the projectile down the bore

Bullet: a single metal projectile most commonly made of lead and covered by a copper jacket

Firearms: Shotgun and Shotgun ammunition

Objective 4

- Describe the parts and functions of a shotgun
- Match ammunition to the respective gauge or caliber on a firearm

A shotgun is a firearm that typically has a smooth bore and fires multiple pellets or "shot". However, some shotguns may fire a single projectile, called a slug and have a rifled barrel. Shotguns typically shoot a spread of small projectiles (shot) instead of a single bullet as with a rifle or handgun. Shotguns are typically used for shooting moving targets in the air. Shotgun styles allow a wide variety of choices including the gauge, the type of choke and the type of action.

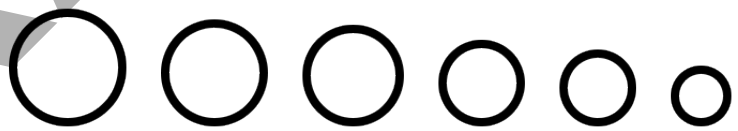
Parts of a Shotgun

Gauge

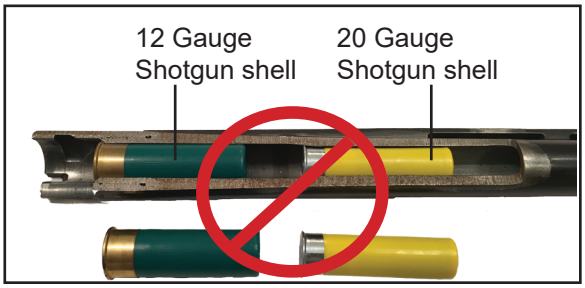
Gauge is a measurement that has to do with the size of the barrel. Common shotguns are 10 gauge, 12 gauge, 16 gauge, 20 gauge and 28 gauge. The only shotgun that is not measured by gauge is the .410-caliber shotgun which means it has a .41 inch barrel diameter. Shotgun gauge size is marked on the barrel of the shotgun and on the box of ammunition. Make sure the ammunition matches what is stamped on the gun barrel.

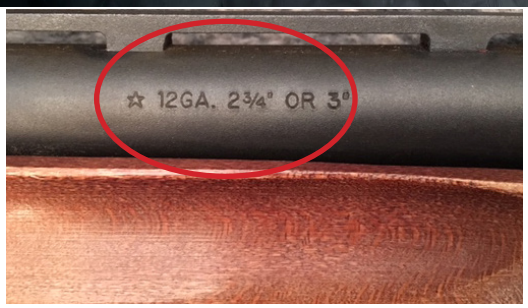
Courtesy of Federal Ammunition

Another way to look at is from the diameter of the barrel. The measurement is in inches.



Carrying different calibers and gauges of ammunition together can lead to extremely dangerous situations where injury or death may occur. It is common to hunt in a groups where hunters will carry different types of firearms which use different sizes of ammunition. This picture shows a cut away portion of a twelve gauge shotgun barrel. A twenty gauge shell can slide down into the barrel of a 12 gauge several inches before it becomes lodged. A 12 gauge shell can still be loaded and the action function properly without knowing the 20 gauge shell is lodged in the barrel. In this situation if the gun was fired it could damage the firearm or worse. The barrel could also explode and create deadly metal shrapnel which could injure or kill the shooter or people in the area. If hunting with others and different gauges and calibers are used each person should carry their own ammunition to avoid this dangerous situation.





Shotgun shell Parts:

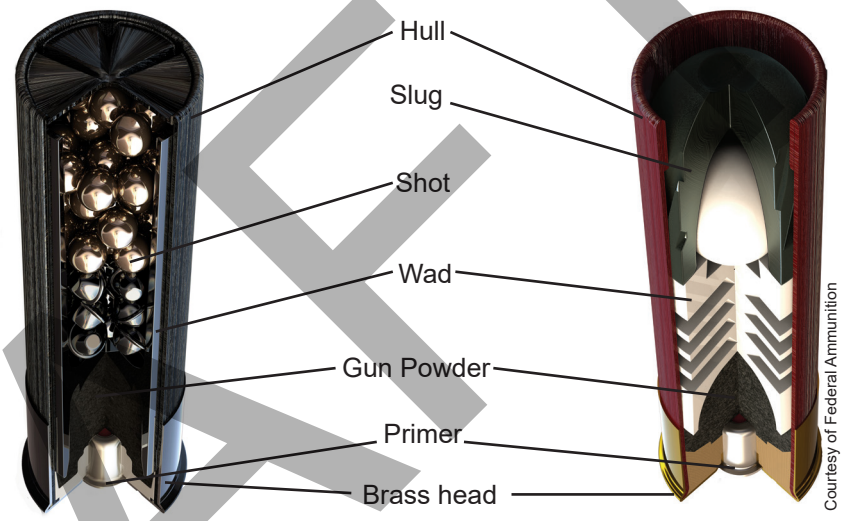
Hull: the plastic shell that holds all the components of the shot shell together

Primer: a percussion compound that ignites the gunpowder

Gunpowder: explosive substance that burns creating pressure that propels the shot or slug out the muzzle

Wad: typically a plastic-like cup that helps keep the shot together while traveling down the bore

Shot: metal pellets that vary in size and amount



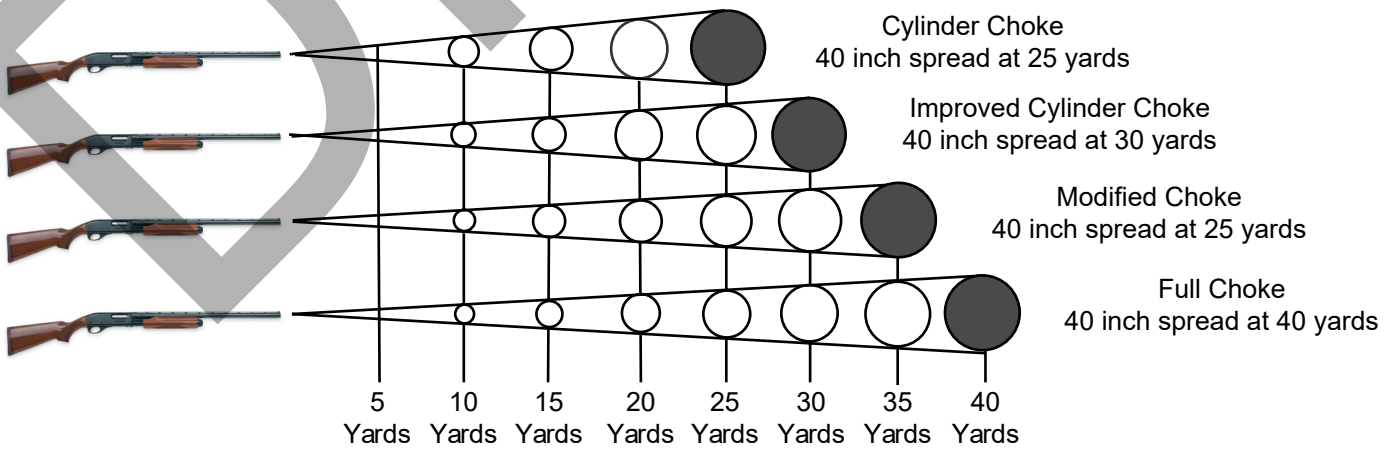
Courtesy of Federal Ammunition

Choke

The choke is a taper in the barrel that determines the pattern of the shot. As pellets leave the barrel they spread or disperse. A tight choke keeps pellets together as they leave the barrel so they travel farther before dispersing. An open choke allows the pellets to start dispersing as soon as they leave the barrel.

The effective range of a shot shell and choke combination will vary. As a rule of thumb, the improved cylinder choke is effective 20-30 yards, the modified choke 30-40 yards and the full choke 40-50 yards.

To find out the best shot shell and choke combination to use at different distances, it's necessary to pattern your shotgun. It isn't a complicated process, but it does take some time and effort. Patterning your shotgun will keep you from wounding or crippling game and will reduce the number of shots needed to harvest your game.



Characteristics of Ammunition and Failure to Fire

Objective 5

- Describe how ammunition works
- Describe how to safely handle a firearm during and after a misfire
- Explain the importance of a safe backstop when taking a shot or during a misfire

Rifle and shotgun ammunition work similar but there are some slight differences.

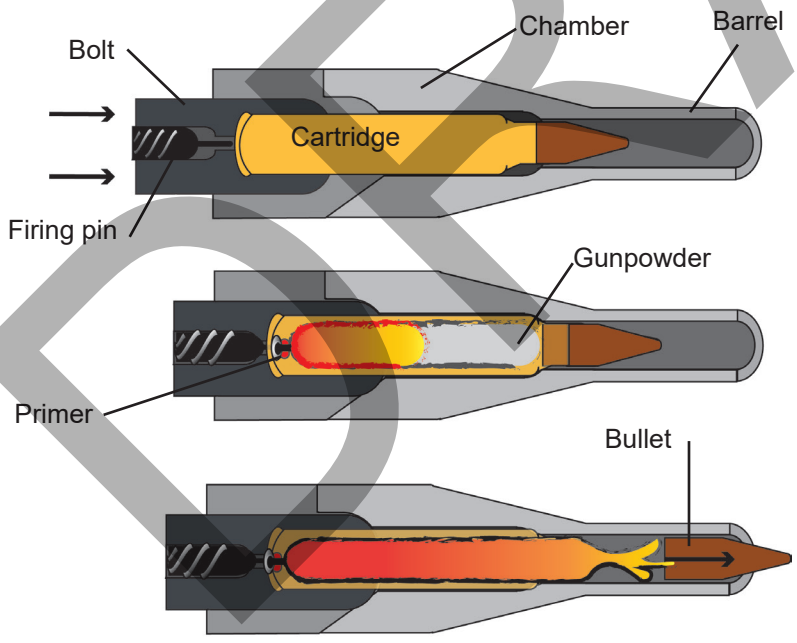
Rifle and Pistol Ammunition firing sequence:

1. The firing pin strikes the cartridges primer
2. The primer ignites and starts the gun powder burning
3. The gunpowder burns and builds up pressure expanding the case and releasing the projectile (bullet)
4. The projectile is pushed down the bore and turns with the rifling until it exits the muzzle.

Shotgun Shell firing sequence:

1. The firing pin strikes the primer of the shot shell
2. The primer ignites and starts the gun powder burning
3. The gunpowder burns and builds up pressure opening up the crimped shot shell releasing the shot or slug
4. The shot or slug is pushed down the bore along with the wad (helps keep shot together and seal off gasses) until it exits the muzzle

Firing Sequence



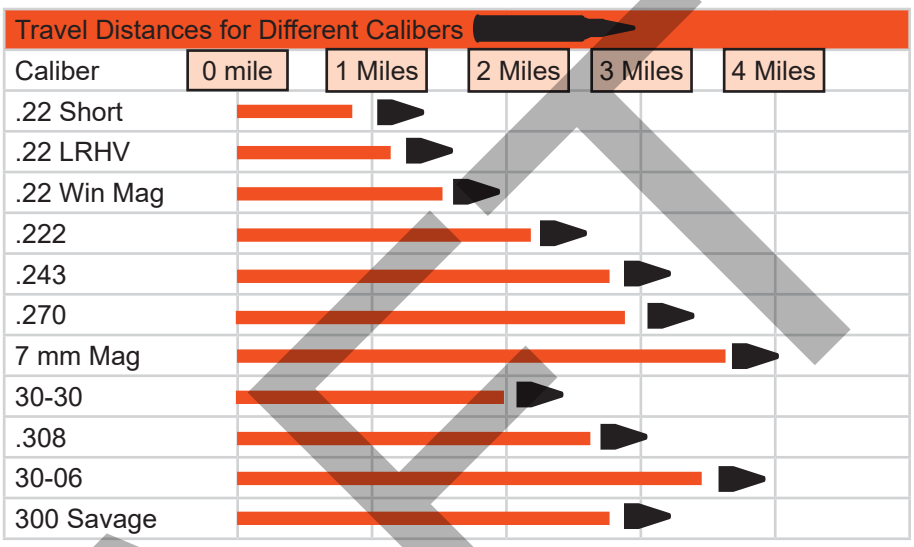
The bolt slides forward, moving the cartridge forward and compressing the spring around the firing pin

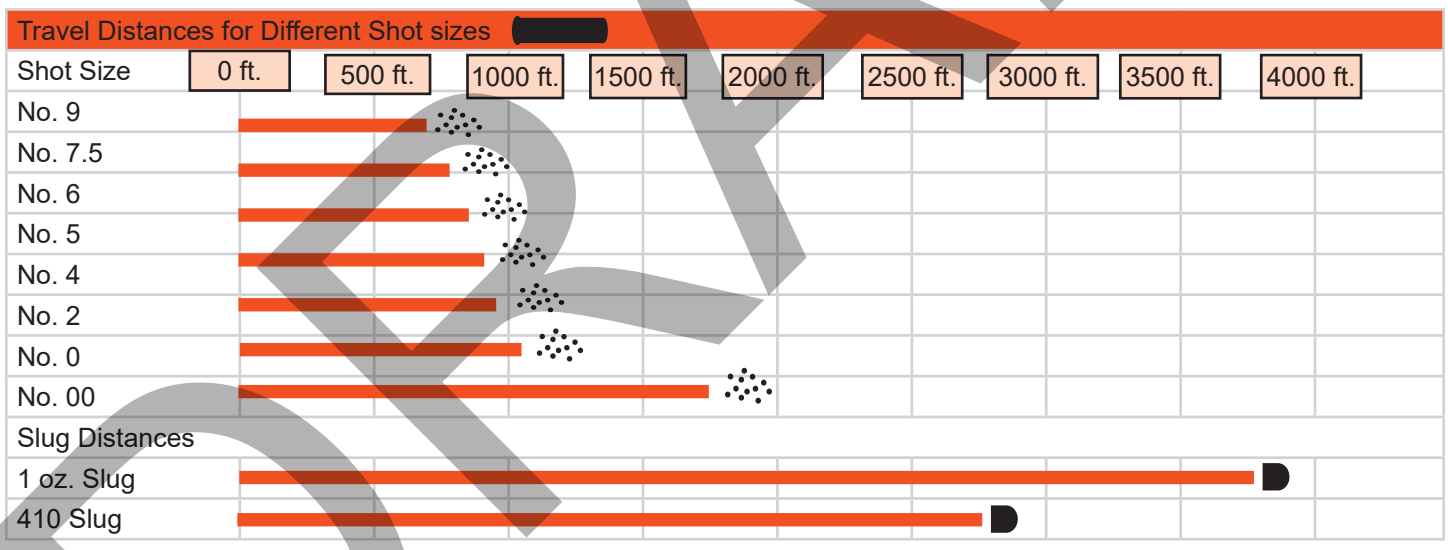
Once the trigger is pulled, the firing pin goes forward, striking the primer and igniting the gunpowder.

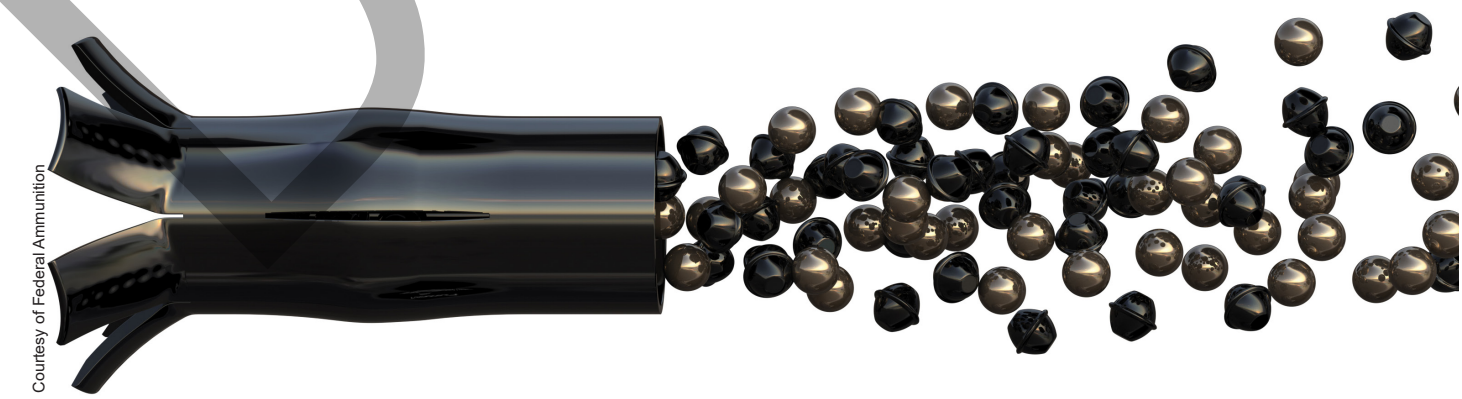
Once the gunpowder is ignited, the pressure builds and forces the bullet out of the barrel.

Even if you follow all the safe firearms handling rules and take extra care to make sure you are using the correct ammunition, misfires can occur. It is important to follow these steps to keep yourself and others in your hunting party safe at all times.

- Maintain safe muzzle control
- Keep the action closed and firearm pointed at a safe direction
- Wait 15 seconds (60 seconds for a muzzleloader)
- If the firearm still has not fired, remove the shell or cartridge from the chamber
- When shooting or during a misfire, a safe impact area is necessary. The backstop needs to be solid enough to capture fired bullets and is constructed of a material that will not allow ricochets. Also, when hunting, the shooter must be certain that the area beyond the intended target is clear of any non-target objects.







Courtesy of Federal Ammunition

Chapter 3

Firearm Safety

Minnesota Hunter Education Program

Safe Firearms Handling

Objective 1

- Identify the four basic rules of firearm safety
- Show how to transfer a firearm from one person to another

The person holding the firearm is responsible for the safe handling of the firearm. The International Hunter Education Association (IHEA) emphasizes four basic rules of firearm safety.

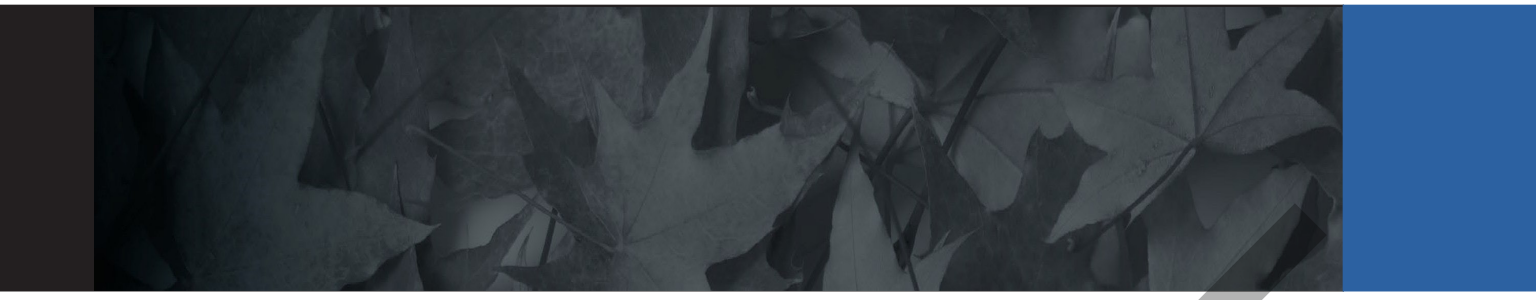
1. **Treat every firearm as if it were loaded.**
2. **Always point the firearm in a safe direction.**
3. **Be sure of your target and beyond.**
4. **Keep your finger out of the trigger guard and off the trigger until ready to shoot.**

Basic rules for passing a firearm to another person:

1. Keep the firearm pointed in a safe direction
2. Unload the firearm with your back toward the other person
3. Engage the safety
4. With the action open, check the chamber and magazine to be sure there is no ammunition
5. With the action open, allow the recipient to visually verify that there is no ammunition in the chamber or magazine
6. Allow the recipient to grasp the firearm securely
7. Maintain your grip until the recipient acknowledges a secure hold by saying or "I have it"

Additional Safety Tips

- When carrying a firearm, the most important thing to do is to keep the muzzle pointed in a safe direction. Never point a firearm at yourself, others or anything you do not want to destroy.
- Do not use telescopic sights (scope) as a substitute for binoculars.
- If a friend refuses to follow safe firearm handling rules while hunting with you, immediately tell them your concerns, and don't continue to hunt with them unless they follow the rules.
- Always unload your firearm and examine the barrel after a fall to be sure there is no snow, mud, or dirt in the barrel. If there is, clean it out before firing.
- Never use drugs or alcohol before or during shooting.
- Don't shoot at water or hard objects such as rock or metal.



Loading and Unloading

Objective 2

- Show how to load and unload common modern firearm actions

Firearms should be kept unloaded unless they are in use. Be sure you are familiar with the way your firearm is loaded and unloaded. When loading and unloading a firearm, make sure the muzzle is pointed in a safe direction. Have someone who is familiar with the way your firearm works show you the proper methods of loading and unloading ammunition.

- Always check for yourself whether or not a firearm is loaded. Don't rely on someone else's say-so.
- Check to make sure the safety is on.
- Practice using "dummy" ammunition until you can safely and efficiently load and unload your firearm.
- Keep your finger out of the trigger guard when loading and unloading ammunition.
- Even if you just unloaded it, always treat a firearm as if it were loaded.
- While hunting, there are a couple of safety rules to keep in mind.
- Loading your firearm should be the last thing you do before heading out to hunt.
- Watch for distractions – cell phones, dogs, other hunters.
- If there are more than two people, make sure to face away from each other when you load your firearm.

Loading sequence:

1. Point the muzzle in safe direction
2. If possible, engage the safety
3. Keep finger off the trigger and outside the trigger guard
4. Open the action
5. Load the correct ammunition into the chamber or magazine
6. Close the action. The firearm is loaded

Unloading sequence:

1. Point the muzzle in a safe direction
2. If possible, engage the safety
3. Keep finger off the trigger and outside the trigger guard
4. Remove the magazine
5. Open the action
6. Eject cartridges if it is the only way to remove them
7. Physically and visibly check to make sure the chamber and magazine are empty

Keep your finger out of the trigger guard until ready to shoot

Always check to see if a firearm is loaded or not

Eye and Ear Protection

Objective 3

- Explain why it is important to wear eye and ear protection

When a firearm is discharged, whether it be a shotgun, rifle or handgun, it is important to always protect your eyes and your ears. When the cartridge is fired, things happen that can damage your eyes and ears if not protected.

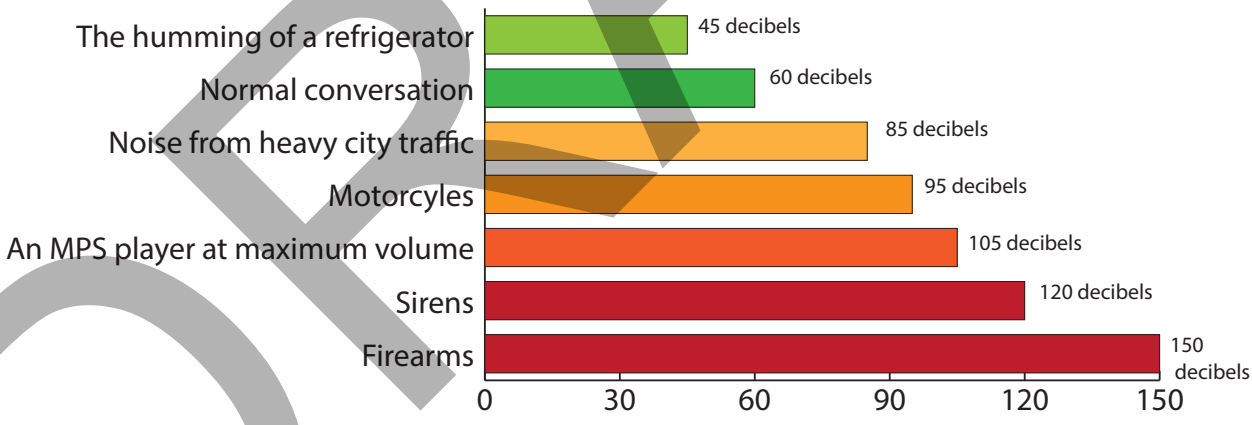
First, firing a firearm creates a loud noise which can damage hearing. A sound pressure of more than 85 decibels can damage your hearing. Below are the average decibel ratings of some familiar sounds.

Your distance from the source of the sound and the length of time you are exposed to the sound are also important factors in protecting your hearing.

A good rule of thumb is to avoid noises that are too loud, too close, or last too long (US department of health and human services).

The second thing that happens when a firearm is fired, it sends the projectile down range. Along with the projective, the firearms also discharges small particles of the projectile, burning gas and other residue which can damage your eyes.

Always remember to wear safety glasses and ear protection. Your eyes and ears can't be replaced.



Ear and eye protection comes in all types of sizes and styles.

Find the ones that fit you the best and are comfortable to wear.

Transporting firearms and types of firearms cases

Objective 4

- Describe how to make a firearm safe for transport in a vehicle, watercraft or ATV.

To safely transport a firearm in a motor vehicle, motorized watercraft, snowmobile or ATV, the firearm should have the safety engaged, be completely unloaded, and the magazine removed and placed in a proper firearm case. The case should have the ability to be zipped, tied, buckled, snapped or fasten by any means to completely enclose the firearm.

Minnesota has safety rules and laws that govern transporting firearms in a motorized vehicle. In some circumstances a firearm can be transported uncased. Check with the Minnesota hunting trapping regulations booklet for more details.

A firearm should never be placed with resting the barrel against a tailgate, other part of a vehicle or any other object. The firearm could easily slide and hit the ground, causing it to fire.

Is this safe?

Student Worksheet

1. What should you assume about every firearm?

2. When handling a firearm, you should always control what?

3. Who is responsible for safe handling of the firearm?

4. You should never take a shot until you are certain of what?

5. Is it OK to use drugs or alcohol before or during shooting?

6. If you feel yourself falling, what should you do?

Firearm Storage and safety in the Home

Objective 5

- Describe how to safely store firearms and ammunition

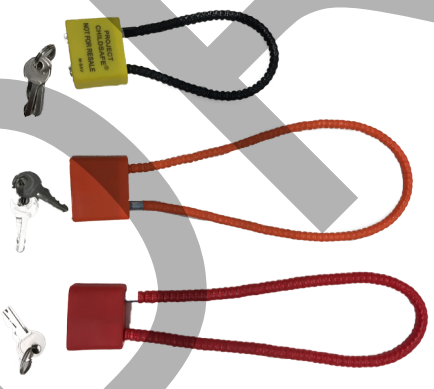
Safe firearm handing does not end in the field. Safe storage of your firearms is your responsibility. Firearms should be loaded only when in the field or on the range. At all other times, during travel and especially in the home, they should be kept unloaded.

Never handle or show firearms without first carefully checking to be sure they are unloaded. Open the action and keep it open until the firearm is again ready for storage. Never assume that a firearm is unloaded, even if it was checked only a few minutes earlier. Don't trust the safety to compensate for unsafe firearm handling. Like all mechanical devices, safeties can malfunction, and in any case, they are only intended to supplement human care and intelligence.

The best method for storing firearms and ammunition in the home is locked separately in a secure cabinet or safe. If it's not possible, seek the next best solution. That would be locked together in a safe or cabinet.

Finally, if the proper storage facilities are not available, trigger locks should be purchased. On the practical side, firearms should be stored in a reasonably dry environment but away from exposure to heat. Dampness causes rust and heat can bake the wood of stocks and grips to the point of cracking or splitting.

When handling firearms, always keep the muzzle pointed in a safe direction. Avoid horseplay at all times -- firearms are not toys and they must be handled with respect. Common sense must be used in choosing the safest direction to point the muzzle. "Down" is not always the safest direction and neither is "up."



Never show a firearm to a friend without an adult present.

If you find a firearm laying out at your house, a friend's house or anywhere, **DON'T touch it!**

Leave it where it is and call an adult.

Cleaning Firearms

Objective 6

- List the steps to safely clean a firearm

Firearm cleaning and maintenance is an important part of firearm safety. Dirt and debris can easily collect in any firearm. You should clean your firearm after every use in order to ensure safe and efficient functioning. Every hunter should own a fully stocked cleaning kit and use it regularly.

Cleaning kits should include:

- Bristle brushes for each caliber and gauge firearm you own
- Cleaning rods of varying lengths for rifles, shotguns and handguns
- Cleaning patches sized to fit down the bore of each different firearm
- Patch holders that screw into the ends of the cleaning rods
- A stiff toothbrush
- Bore solvent
- Gun oil

The procedure for cleaning all firearms is essentially the same:

- Make sure the firearm is unloaded
- Check for obstructions in the barrel and malfunctions
- Run a patch or bristle brush soaked in bore solvent down the barrel
- Run dry follow-up patches to dry the barrel and check for traces of rust
- Once clean, run a patch with a light coat of gun oil down the barrel
- Clean all exposed parts of the action
- Clean and oil all exterior metal parts

If while cleaning your firearm you notice damage or loose parts make sure to bring your firearm to a certified gunsmith for repairs.

When cleaning your firearm, make sure to use the correct size brush and rod.

Student worksheet - Would you take this shot? Explain why or why not.

1.

2.

3.

4.

1. What are the 3 main parts of rifles and shotguns?

2. What are the common types of modern firearm actions?

3. What is the difference between rifle and shotgun ammunition?

4. What is the difference between rifles and shotguns inside the barrel?

5. Where do you find the ammunition information for a firearm, and what information will it tell you?

6. On the ammunition, the stamp is called a_____. What does this tell you?

7. What are the four basic rules of Firearm Safety?

8. Explain what the Basic Rules for passing a firearm to another person are?

9. Explain what the correct “Loading and Unloading Sequences” are for Firearms?

10. What two body parts do we protect when using Firearms, and what are some examples we can use to protect them?

Match the term to the correct definition

Safety:	A firearm whose barrel has small spiraling grooves causing the bullet to spin and fly straighter
Wad:	A firearm that fires multiple pellets
Primer:	The part of a firearm that loads, fires, and ejects the cartridge or shell
Bullet:	The part of the firearm through which the bullet or pellets travel when fired
Action:	The wood, metal or plastic frame that holds the action and barrel
Trigger guard:	The end of the barrel where the bullet comes out
Rifle:	Protects the trigger from unintended movement.
Barrel:	Allow precise alignment of the firearm in relation to the target.
Gun Powder:	A mechanical device that is designed to block the trigger and prevent the firearm from firing
Sights:	A percussion compound that ignites the gunpowder
Shot:	Explosive substance that burns and creates pressure forcing the projectile down the bore.
Shotgun:	A single metal projectile most commonly made of lead and covered by a of copper jacket
Stock:	The plastic shell that holds all the components of the shot shell together.
Hull:	Typically a plastic like cup that helps keep the shot together while traveling down the bore
Muzzle:	Metal pellets that very in size and amount

Firearm Loading sequence

1.
2.
3.
4.
5.
6.

Firearm Unloading sequence:

1.
2.
3.
4.
5.
6.
7.

Chapter 4

Fundamentals

Minnesota Hunter Education Program

Fundamentals of Marksmanship

Objective 1

- Explain the fundamentals of rifle marksmanship and shotgun shooting

Definition of Marksmanship: A hunter or shooters ability to apply the fundamentals of shooting to accurately hit their intended target. Fundamentals are different depending on the firearm you are using. However, the fundamental that is the same for all firearms is sight alignment.

The first step is to determine your dominate eye. The easiest way is to pick an object on the wall. Make a triangle with your two hands with an opening in the middle. Put the opening over the object. Keeping both eyes open, pull your hands back to your eye. This is your dominate eye. Your dominant eye will also determine if you shoot your rifle or shotgun right or left handed.

Form a triangle with your hands over an object on the wall

Pull back to your eye, keeping the triangle over the image

Fundamentals of Shooting a Rifle

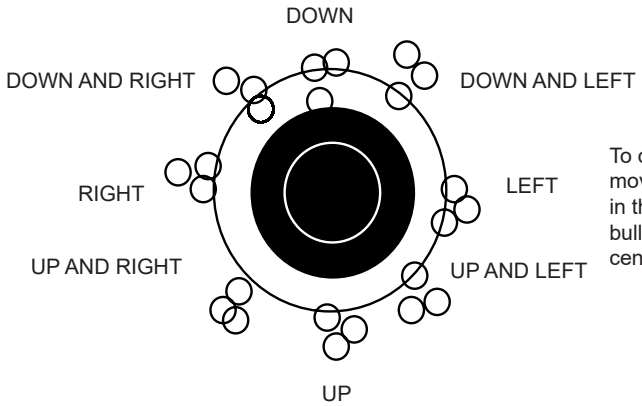
Once you have determined your dominate eye, the next step is to know how different sights will affect your aim. There are two ways to looks at the sight; sight alignment and then sight picture. As mentioned before, there are three basic types of sights: Open sights, peep sights and a scope.

Sight alignment: Having your sights centered and in line with your dominant eye

Sight picture: Having the front and rear sights in line with your eyesight so you can shoot straight at the intended game or target.

To sight in a rifle with open or peep sight, and adjust the bullet impact, you must adjust the rear sight in the direction you want the bullet to impact the target.

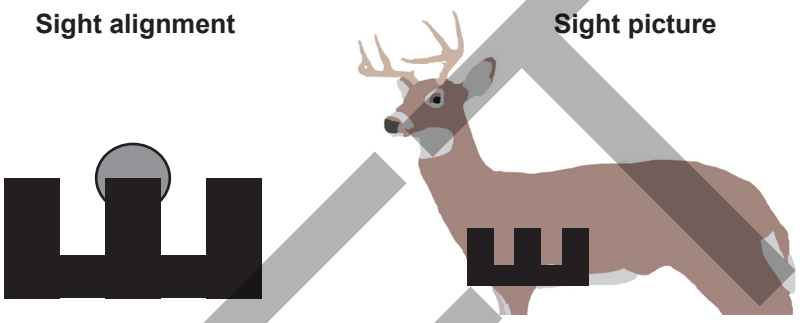
For example, if you want the bullet to move left, you adjust the rear sight to the left.



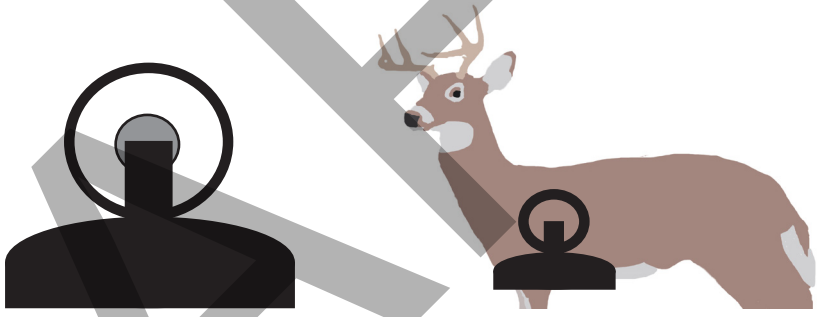
To center group, move the rear sight in the direction the bullet must move to center on the target

Sight alignment **Sight picture**

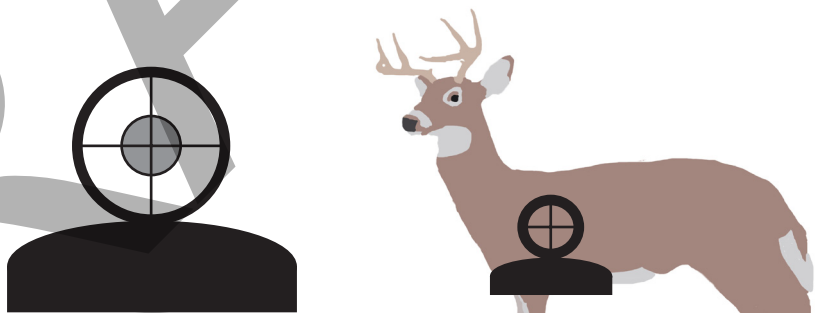
Open sights: the front sight post should be centered in the rear notch. The front sight height should be equal to the height of the rear sight with equal light or spacing on both sides.



Peep sights: the front post should be centered in the middle of the peep with equal spacing from top to bottom and equal light on both sides.



Scope: you aim using the cross hairs or reticle in the scope. The view through the scope should be clear with no shadow around the reticle. If you see shadow around the outside of the scope your head and eye are not in the proper position.



Trigger Control: Pressing the trigger until the firearm fires without changing your sights alignment or sight picture.

Breathing (Natural respiratory pause): It is best to breathe normally when shooting. Holding your breath will eventually cause your body to shake making for a poor sight picture. Try to shoot in between breaths, right after you breathe out. This is the most consistent time to shoot.

Stance/Position (Natural Point of Aim): No matter which of the 4 basic shooting positions, a shooter should always try to get a Natural Point of Aim. Natural point of aim is the position the firearm wants to point when being held by the shooter. If the firearm doesn't naturally point at the target, you must move your body to get the firearm to point where you want it using the least amount of muscles possible. To check natural point of aim a shooter would aim at a target, close their eyes, then open them back up and see if they are still on target. If the shooter is not on target the shooter should move their entire body (not just their arms) until they are on target.

Follow through: After the trigger breaks you need to hold the trigger to the rear until you can see the result of your shot. Don't lift your head off the stock. Following through keeps your shooting consistent and will increase your accuracy. Following through enables you to stay aimed on the game/target ready to take another shot if needed.

Fundamentals of Shotgun shooting

Shotgun shooting involves similar shooting fundamentals as a rifle but have slight differences, as the target or game we are aiming at may move. A shooter can practice using clay targets to prepare for the hunting season. Successfully shooting at shooting moving targets will involve combining specific shooting techniques such as stance, mounting shotgun to shoulder, pointing shotgun and ability to swing the shotgun across in front of you while aiming just ahead of the moving target.

Stance

Shotgun pulled into the shoulder, shooter should lean over their front foot with the rear foot back and bladed to the target. When mounting the shotgun, the shooter should bring the shotgun to their eye (not the other way around).

Mounting a shotgun

Mounting the shotgun is the act of bringing the shotgun up to your head/eye from a ready position. When mounting the shotgun it is important to move the shotgun forward first to clear clothing then bring it up to your eye (don't move your head down) and then pull back into your shoulder pocket.

Pointing a shotgun

Pointing or aiming a shotgun is different than aiming a rifle or handgun. When shooting a shotgun at a moving target you want to look at the target not at the bead or sight. Properly mounting the shotgun to your shoulder will put your eye in line with the barrel enabling you to point or aim the shotgun without looking at the sights.

Leading game and targets

When shooting at a moving target it is necessary to lead or shoot in front of it. If you do not lead a moving target you will most likely shoot behind it. The amount of lead you give depends on the speed of the game or target.

There are three basic ways to lead a target.

Sustain the Lead: This is where you keep your shotgun pointed in front of the target a certain distance and keep that lead as the target is moving, then firing when you have a safe shot.

Swing Through: The swing through starts with your shotgun pointed behind the target. Then you swing your shotgun over the target, firing once you are in front of the target.

Ambush method: The ambush method is used most often when hunting grouse in wooded areas where it is hard to maintain constant visual contact with a bird. When ambushing, you point the gun directly in front of the bird at a set lead without swinging through.

Trigger pull: A shotgun trigger is usually pulled very rapidly when shooting at moving targets.

Follow through: Follow through means keeping the shotgun moving even after the trigger is pressed. Stopping the shotgun will lead to missing the target. Also, the shooter needs to keep the shotgun mounted and avoid the tendency to lift their head off of the stock after the shot.

Shooting Positions

Objective 2

Each position can be modified in a way to best fit the hunter. For the best accuracy, the closer you are to the ground the more stable you will be. With each position the shooter should try to maintain their natural point of aim and have as many points of contact to the ground as possible.

The Prone Position

The prone position is by far the most stable firing position and the most accurate firing position. In the prone position you lie on the ground directly behind the rifle with your elbows on the ground. However, the prone position is limited to flat areas without tall vegetation.

The Sitting Position

The sitting firing position generates much less sway in the muzzle than the standing position and is even more stable than kneeling. In the sitting position the shooter should first cross their ankles. Shooters should then try to rest both of their elbows on the inside of their knees.

The Kneeling Position

The kneeling firing position is more stable than the standing position. Make sure to not have bone on bone contact between your elbow and your knee.

The Standing Position

The standing position is easy to adopt quickly upon spotting game. However, it is the most unstable, making it the least accurate shooting position. To help combat recoil, shooters should lean forward over their front foot when shooting from a standing position. It is also a good idea to pull the firearm into the shoulder with the non-firing hand.

Alternate shooting positions: Using specialized attachments to firearms can help enhance a shooters stability when taking a shot.

Bipod

A bipod mounted to the front of the stock can help stabilize the firearm when shooting from a prone position.

Shooting Sticks or Tripod

From either the kneeling, sitting, or standing position, shooting sticks or a tripod can be used to stabilize the front of the firearm while the shooter can stabilize the rear of the firearm.

Natural rest

A shooter can simply utilize the natural features and terrain around them (stumps, logs, branches, rocks, etc.).

Make sure the muzzle is clear of possible obstructions when using the natural rest.

Blaze Orange and Pink

Objective 1

- Explain the importance of wearing blaze orange and blaze pink to prevent hunting-related shooting incidents.

Blaze orange clothing has been found to be one factor that has helped make hunting one of the safest sports or activities. The IHEA-USA states that Hunter (Blaze)Orange is the most effective color to be worn by hunters in the field to prevent hunting incidents. Absent of any scientific evidence to the contrary, No nationally recognized study has established or verified standards for the wavelength, luminance, or excitation purity required for visibility of any color other than Hunter (Blaze) Orange in natural environments by human observers.

In Minnesota, all hunters and trappers in the field during the open firearms or muzzleloader deer seasons must display blaze orange or blaze pink on the visible portion of the person's cap and outer clothing above the waist, such as a vest or jacket, excluding sleeves and gloves. Blaze orange or pink camouflage patterns are allowed and must be at least 50 percent blaze orange or pink within each square foot. The more blaze orange you wear, the more visible you will be to other hunters.

While there are exceptions to the blaze orange and blaze pink requirements for archery, turkey, migratory waterfowl and trapping, it's a good and safe idea to wear it to and from your hunting location.

What color do you see the best?

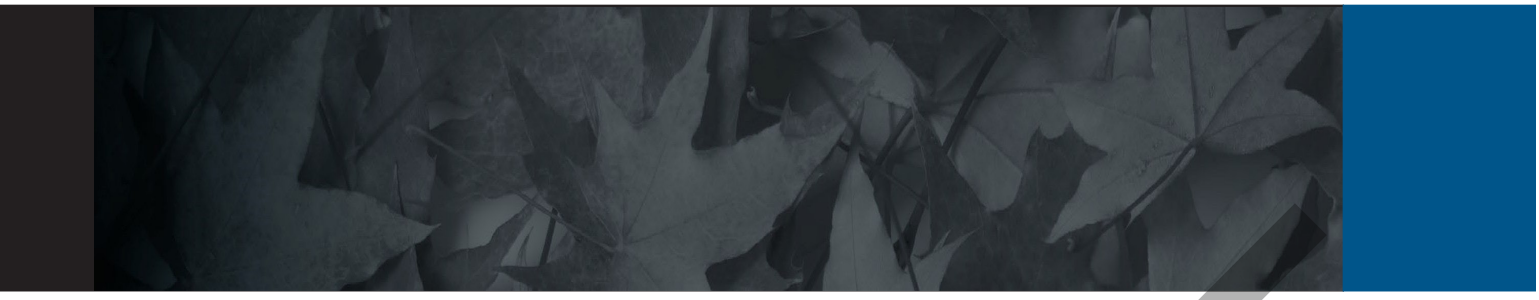
20 yards - Pink, Blaze Orange and camouflage

30 yards - Blaze Orange and pink

When hunting from a camouflage blind, a good rule of thumb is to throw blaze orange on it to be seen from all sides, especially the back side.

Hunters can also mark the area they are hunting with blaze orange signs.

70yards - Pink and Blaze Orange



Safely Carrying Your Firearm

Objective 2

- Identify a safe firearm carry while hunting alone and with others

There are a few methods of carrying your rifle or shotgun when you are hunting. The method you choose will depend upon the type of animal you are hunting and the conditions of the environment. Always be conservative and choose the safest method possible.

All hunting situations are different and most of them could easily change at any given time. For example, the cradle carry with the muzzle of your firearm pointed to the left is a very safe carry if you are the furthest left person in a group of pheasant hunters. However, if another hunter joins your group to your left, you will need to adjust your carry. You must remember, when carrying a firearm, the most important thing is to keep the muzzle pointed in a safe direction at all times. If a firearm is pointed in a safe direction and it went off, no one would get injured.

Two-handed Carry
Hold the grip in one hand and the firearm's forearm in the other hand.
This carry provides the hunter the best control with the firearm.

Cradle Carry
Cradle the firearm's forearm in the bend of one arm. This can change depending on the location of others walking on either side of you.

Shoulder Carry
Rest the forearm on the top of your shoulder by holding the grip.

Trail Carry
Hold the stock with one hand, and make sure the muzzle is pointed at the ground.

Elbow Carry
Hold the grip of the firearm over your elbow, let the stock rest against the back of your upper arm. The muzzle of the firearm should be pointing down. Using this carry gives the handler the least control.

Crossing Fences, Waterways and Other Obstacles

Objective 3

- Demonstrate how to safely cross an obstacle or hazardous terrain when hunting alone and with others

There is a potential danger of an accidental discharge when hunters cross fences, streams or other obstacles. It is easy to lose your footing or your balance and slip when climbing over a log, stepping down into a ravine or wading through a stream. A loaded firearm in these situations can be extremely dangerous.

Always unload your firearm. When picking up, or accepting a firearm from another person, always make sure that the safety is on, action open and visually verify unloaded.

If hunting alone, put the safety on, safely unload the firearm and place the firearm on the ground on the other side of the obstacle. If possible cover the end of the muzzle with a hat or glove. Safely cross over the obstacle. If crossing a fence, try to cross by a post. Then retrieve your firearm. Make sure to check the barrel for obstructions before safely reloading.

If two or more people are hunting together and come to an obstacle, all parties should first unload their firearms. Hunters should unload all firearms while standing back to back. The first hunter hands his or her firearm to the second hunter.

The second hunter visually confirms that both firearms are unloaded and the actions are open. The hunter should verbally confirm control of the firearm by saying “I have it”. The first hunter then crosses the obstacle. The second hunter then passes both firearms over the obstacle to the first hunter using visual and verbal confirmations. The second hunter then crosses the obstacle and retrieves his or her firearm from the first hunter. Both hunters stand back to back and reload, before continuing on the hunt.

After unloading, place a hat or glove over the barrel to keep the barrel free from dirt or snow.

Safely cross the obstacle, if possible by the post.

Remove the hat and check for obstructions in the barrel.

Safe Zones of Fire

Objective 4

- Understand your zone of fire and when it is safe to take a shot

The area into which a hunter may shoot safely is referred to as a “zone of fire.” When hunting alone, your safe zone of fire will be determined by your field of view, the presence of trees, rocks, water or other obstacles, and the range of your firearm.

Upland game bird and waterfowl hunters often use zones of fire that are triangle-shaped. Hunters walk or sit in a straight line, in sight of each other when hunting. No one runs ahead or lags behind the line.

The area behind the hunters is off limits–no one turns to shoot behind. The middle hunter or hunters have the narrowest zone of fire–about 45 degrees. Hunters to the left and right ends have a broader zone of fire since they can swing to the outside edges. No one shoots at game that is directly between each hunter.

Turkey Hunting Safety

Objective 5

- Explain the basics of a safe turkey hunt

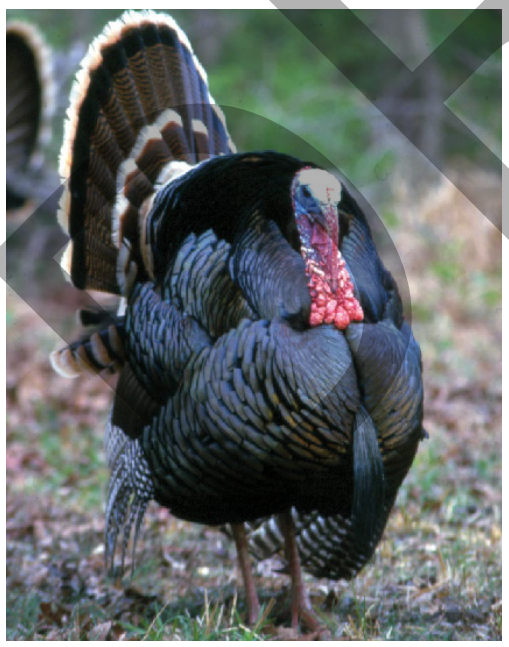
Turkeys behave differently from other game species, and hunters use different techniques to hunt them. Therefore you should observe some special safety rules while hunting them.

Never stalk a turkey. The chance of getting close enough for a shot is slim, and the chances of becoming mistaken for a turkey and involved in a hunting accident are increased.

Don't wear red, white or blue. Red is the color most hunters count on to differentiate a gobbler's head from the hen's blue-colored head. Never move, wave, or make turkey sounds to alert another hunter to your presence. A quick movement may draw fire. Yell in a loud voice and remain hidden. Be particularly careful when using a gobbler call. The sound and motion may attract other hunters. When selecting your calling position, don't try to hide so well that you cannot see what is happening around you.

The best calling position provides a background as wide as your shoulders, and will completely protect you from the top of your head down. Small trees will not hide slight movements of your hands or shoulders which might look like a turkey to another hunter who could be unwisely stalking your calls.

Never shoot at a sound or movement. Be 100 percent certain of your target before you pull the trigger. You must see the whole bird to determine whether it is safe or legal to shoot. That way, the bird will be in range and you will be sure it is a turkey. When turkey hunting, assume that every sound you hear is made by another hunter.



Turkey Hunting Safety

- Never assume that you are alone in the woods - even if you are the only one with permission to hunt.
- Never assume that other hunters are acting responsibly.
- Use a flashlight when walking in the dark.
- Make sure your head-net does not obscure your vision.
- Be aware of what is beyond your target before you shoot.
- Keep your firearm unloaded until you are set up in the field. Keep your finger off the trigger until you are ready to shoot.
- Keep your decoy covered until ready to set it up. Also, after harvesting a turkey, cover it until you are out of the woods.
- Wear orange when moving through the woods.
- Never stalk a turkey.

Tree Stand Safety

Objective 6

- Understand the basics of tree stand safety, including what to look for and how to stay safe while in your tree stand.

A tree stand is typically elevated and provides a place to sit or stand. It gives the hunter the advantage of height and silence; big advantages when hunting with bows. It helps prevent the hunter's scent from drifting towards wildlife. However, it does have some drawbacks. Once you are in a tree stand you can't move around to get a better shot.

When purchasing a new tree stand, read and understand the manufacturer's warnings and instruction. Practice setting up the tree stand at ground level prior to using at elevated positions. Keep the manufacturer's warnings and instructions for later review as needed, for instructions on usage to anyone borrowing your stand, or to pass on when selling the tree stand. Use all safety devices provided with your tree stand. Don't exceed the weight limit specified by the manufacturer.

Inspect the tree stand for signs of wear or damage before each use. Contact the manufacturer for replacement parts.

The biggest hazard of a tree stand is an accidental fall. Accidents can happen when climbing into and out of a tree stand. On ladder-type tree stands, maintain three points of contact with each step. On hanging tree stands, always check the steps to make sure they are securely fastened. If possible try and step down into your tree stand.

Once in their stand, hunters sit on a narrow seat. They also have to get their firearm or archery equipment up the tree. Even a fall from a short distance can result in broken bones or even death.

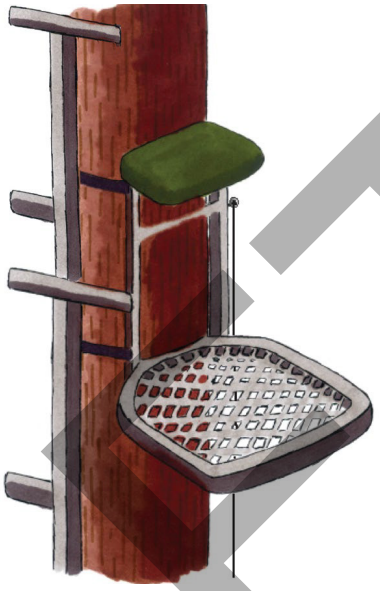
Types of Tree Stands

Objective 7

- Name the different types of tree stands

There are five common types of tree stands.

Once you have selected the type of tree stand you are going to use it is important to look at the type of tree it will be on. Select the proper tree for use with your tree stand. Select a live, straight tree that fits within the size limits recommended in your tree stand's instructions. Check above you in the stand for dead limbs that could fall on you while in the stand. Do not climb or place a tree stand against a leaning tree.



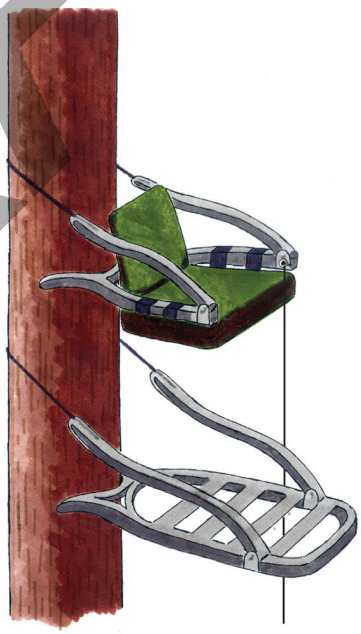
Hang-on Stand

Chained or strapped to trees. Inexpensive and light weight. May be difficult to place in a tree and a ladder may be required. Last step of climbing aid should be installed above platform.

Ladder Stand

Has a built in ladder with a seat platform.

These are often heavy and require at least two to three people to install or remove.



Climbing Stand

Moves up and down the tree with a series of stand up/sit down motions. Can only be used on trees that are straight and have no lower branches.

While climbing with a tree stand, make slow, even movements of no more than 10 to 12 inches at a time. Make sure you have proper contact with the tree or tree stand every time you move.

Self-supporting Stand

(Tripod Stand)

Used when no trees are available. Needs to be erected on level ground.

Lance Meek

No matter which stand you use, practice at ground level with it.

Homemade

Permanent Stand

Should never be used. Wood rots, trees grow and changing weather conditions can cause damage to the stand not seen by visual inspection. Permanent stands and screw-in steps are illegal on wildlife management areas.

Other safety reminders:

- When placing tree stands have a plan, and if possible, a buddy. Before you leave home, let others know your exact location of where you plan to place tree stands and when you plan to return and who is with you.
- ALWAYS carry emergency signal devices such as a cell phone, walkie-talkie, whistle, signal flare, personal device and flashlight on your person at all times and within reach even while you are suspended in your full body harness.
- No matter what type of stand you use, you need to CHECK IT FOR WEAR AND TEAR, such as broken welds, cracked boards, weak spots in the expanded metal, or frayed cables, etc., every time you get into the stand.
- Any kind of stand can be dangerous depending on how it's built, how it's maintained and how well you inspect it.

Tree Stand Equipment

Objective 8

- Describe how to use a full body harness and a haul line

Belt style harness

Full body harness

Full Body Harness

Full body harnesses come in a variety of sizes and styles. Hunters should wear a full body harness meeting Tree Stand Manufacturers Association standards. Failure to use a lifeline while climbing into and down from a tree stand could result in serious injury or death.

Note: Wearing outdated vintage belt type and chest harnesses could result in catastrophic injuries or death.

Attach your full body harness in the manner and method described by the manufacturer. There should be no slack in the tether when seated. The tether is attached to the tree safety strap. Failure to do so may result in suspension without the ability to recover into your tree stand. Be aware of the hazards (suspension trauma) associated with full body harnesses and the fact that prolonged suspension in a harness may be fatal.

Have a plan in place for rescue, including the use of cell phones or signal devices that may be easily reached and used while suspended. If rescue personnel cannot be notified, you must have a plan for recovery or escape.

If you have to hang suspended for a period of time before help arrives, exercise your legs by pushing against the tree or doing any other form of continuous motion. Failure to recover in a timely manner could result in serious injury or death. If you do not have the ability to recover or escape, hunt from the ground.

The full body harness should be inspected after a fall has occurred.

Haul lines

A haul line is typically a rope or strap system that allows equipment to be lifted to the hunter's seat platform. You should use a haul line to pull up your equipment and unloaded firearm or bow to your tree stand. When hauling up a firearm, be sure the muzzle points away from you. Attempt to cover the end of the barrel to prevent plugging it up with debris. Don't attach the haul line in the trigger guard of your firearm. Never climb with anything in your hands or on your back. Prior to descending, lower your equipment on the opposite side of the tree.

This hunter is using a haul line with a built in muzzle guard to keep it clear of debris

Hunting-related shooting Incidents

Objective 9

- Identify common causes of hunting and shooting-related incidents
- Identify reasons for avoiding alcohol and drug consumption prior to and during the hunt.

While hunting-related shooting incidences have decreased since the introduction of hunter education and firearms safety classes, accidents still happen. However, most, if not all could have been prevented.

There are four main types of hunting-related incidents.

1. Hunter Judgment Mistakes - such as mistaking another person for game or not checking the foreground or background before firing
2. Safety Rule Violation - including pointing the muzzle in an unsafe direction, and ignoring proper procedures for crossing a fence, obstacle or difficult terrain
3. Poor firearm handling - which can lead to accidental discharges and stray shots
4. Mechanical Failure -such as an obstructed barrel or improper ammunition

Hunting Incidents in Minnesota 2013-2017

(total of 52 hunting incidents)

CAUSE:

1. Finger on trigger/poor muzzle control= 44%
2. Not aware of area beyond target/victim out of sight= 21%
3. Unsafe backstop/ricochet= 13%
4. Fail to use safety/poor handling= 8%
5. Barrel obstruction/ammunition= 6%
6. Unsafe negotiating of obstacle= 4%
7. Unknown= 4%

Alcohol and drug use prior to and while hunting can impair a hunter's motor skills and judgment, leading to serious injuries or death. In Minnesota, a hunter may not hunt or be afield with a loaded or uncased firearm or an uncased bow while under the influence of a controlled substance or with a blood-alcohol level of .08 or higher. It is a hunter's best practice to abstain from using drugs or alcohol before or during the hunt.

Effects of Alcohol on the body:

- Slurred speech
- Drowsiness
- Breathing difficulties
- Impaired judgment
- Decreased perception and coordination

Chapter 6

Hunter Responsibility and Ethics

Minnesota Hunter Education Program

What is a responsible hunter?

Objective 1

- Describe how responsible hunters show respect for natural resources, other hunters, landowners and themselves
- Describe effective shot placement for a quick kill
- Select a proper firearm and ammunition for the game to be hunted

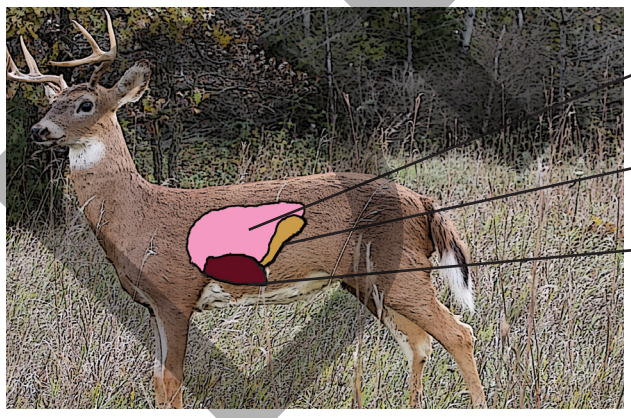
Being a responsible hunter also includes selecting the proper firearm, ammunition and having ample knowledge to deliver a good "kill" shot with that equipment. Hunters need to select a firearm that meets the minimum legal requirement for taking specific game - meaning the proper selection of caliber and gauge. A firearm selected to take game should be powerful enough to take an animal both quickly and effectively.

Before embarking on a hunt, ensure that the firearm selected fits the hunter and the hunter has sufficient training with the firearm. Firearms come in a variety of different sizes. Many shooters practice more often and shoot more proficiently if they use a firearm with moderate recoil.

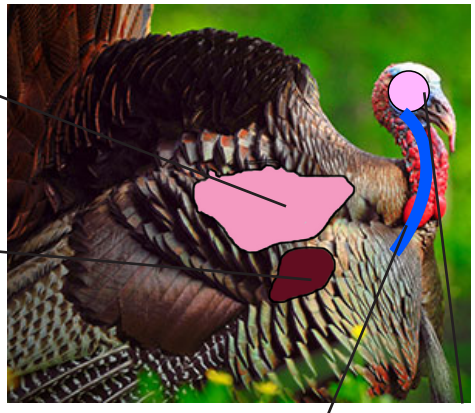
A good hunter understands the anatomy of the birds and animals they hunt to kill the game quickly. They also know which shots to take and which ones to pass.

For example, on big game animals the effective kill shot is in the heart, lung and liver; for Turkeys it is the head and the neck. Flying birds such as migratory waterfowl and pheasants is in the head, spine, heart and lungs. This also helps in the recovery for the downed bird.

Whitetail Deer Vitals



Turkey Vitals



Along with shot placement, hunters must know the best ways to reach those vital organs. For big game, the most effective way is with a broadside or quartering away shot. Hunters must be able to adjust their shots due to varying angles in relation to the game and location of large bones in big game.

Would you take these shots? If yes, Where would you aim?

The ammunition selected for hunting should be based on the type of game to be hunted. Most manufacturers provide recommendations for specific species. Along with ammunition, shotgun users should be sure to select the proper choke and ammunition combination.

Also, in recent years, a push has been made to educate hunters on the importance and use of non-toxic shot. Currently, the use of non-toxic shot in Minnesota is only required when hunting on federal property and when hunting certain migratory bird species. The use of non-toxic shot is a way for hunters to leave less of an environmental impact and promote healthy game and non-game populations.

Enjoying the Minnesota outdoors is one of the great pleasures in life, but along with that comes the duty to protect and conserve our country's wetlands and the animals that inhabit them.

Game Guide

Game	Gauge	Distance (yards)	Choke	Steel shot sizes
Large Ducks	10, 12, 16, 20	20-30	IC/M	1, 2, 3, 4
Mallard, Pintail, Black	10, 12, 16, 20	30+	IC/M/F	BB, 1, 2, 3
Medium Ducks	12, 16, 20	20-30	IC/M	2, 2, 4, 6
Wood duck, Scaup, Widgeon	12, 16, 20	30+	IC/M/F	1, 2, 3, 4
Small Ducks	12, 16, 20	20-30	IC/M/F	3, 4, 6
Teal, Bufflehead	12, 16, 20	30+	IC/M/F	3, 4
Large Geese	10, 12	20-30	IC/M	T, BBB, BB
Giant, Western Canada	10, 12	30+	IC/M	T, BBB, BB
Medium Geese	10, 12	20-30	IC/M	BBB, BB, 1
Snow, Lesser Canada	10, 12	30+	IC/M	BBB, BB, 1

Game	Gauge	Distance (yards)	Choke	HWT TSS shot size	Lead Shot size
Turkey	10, 12, 20	20-30	F	7, 9	4, 5, 6
	10, 12, 20	30+	F/EF	7, 9	4, 5, 6

Game	Gauge	Distance	Choke	Steel Shot Size	Lead Shot size
Pheasant, Prairie Grouse	12,16, 20, 28	20-30	IC/M	3, 4	4, 5, 6, 7.5
	12, 16, 20	30+	M/F	2, 3	4, 5, 6
Ruffed Grouse Partridge	12,16, 20, 28	20-30	SK/IC/M	-	6, 7.5, 8, 9
	12, 16, 20	30+	IC/M	-	5, 6, 7.5
Quail, Dove	12, 16, 20, 28	20-30	SK/IC/M	-	7.5, 8, 9
	12, 16, 20	30+	IC/M	-	7.5, 8
Woodcook, Snipe	12, 16, 20, 28	20-30	SK/IC/M	-	7.5, 8, 9
	12, 16, 20	30+	IC/M	-	7.5, 8
Rabbit, Squirrel	12, 16, 20, 28, .140	20-30	IC/M	-	4, 5, 6, 7.5
	12, 16, 20	30+	IC/M/F	-	4, 5, 6

The Turn in Poachers (TIP) organization has proven to be a useful tool for the public and sportsmen to remain anonymous while reporting illegal poaching activity. The TIP program helps benefit local Conservation Officers as they strive to protect our natural resources.

The TIP organization began in 1981 as a result of private citizens and outdoorsmen recognizing the need for a program to report the illegal taking of protected game and non-game animals throughout the State of Minnesota. TIP is a non-profit statewide organization that is funded through donations, fund raising events, membership fees, and print sales. The TIP organization has created education trailers using illegally taken wild animals to show the public the types of cases brought forth through the Turn in Poachers program.

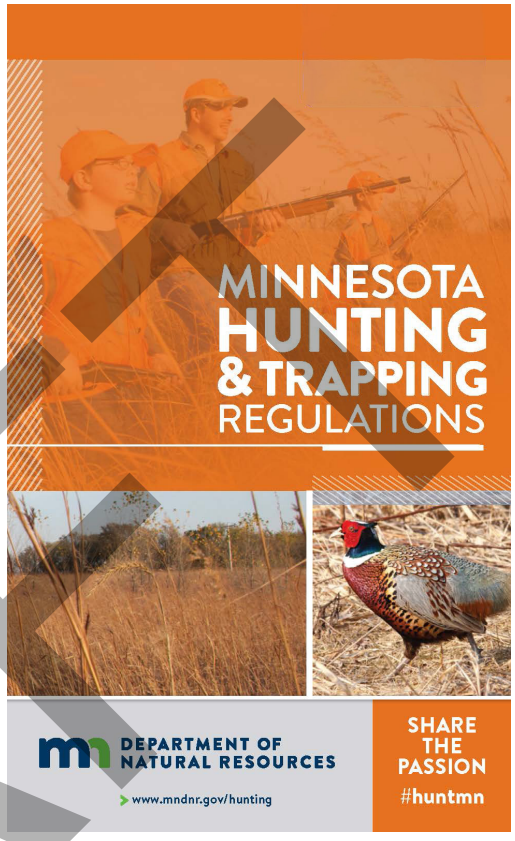
The TIP program provides monetary rewards after criminal convictions of illegal poaching.

Report poaching. Call Turn in Poachers (TIP) at 1-800-652-9093.

Reasons for Hunting Laws

Objective 2

- Explain why hunting laws and regulations are important



There are several reasons for hunting laws. Many laws have been created as reactions to hunting related incidents and others have been developed following new trends and technologies. Despite the changes to our hunting traditions throughout the decades, several principles have remained as reasons for having hunting laws; safety, fair chase, opportunity and fair share, and the management, protection and conservation of wildlife and natural resources. Let's look at each principle so to understand these reasons in greater detail.

Safety:

As you already know, you have come to this class to learn about firearm and hunter safety. The use of firearms requires training and knowledge so to reduce incidents and to be used in a safe manner. Similarly, outdoor recreation comes with its own set of risks and safety concerns. Navigating through a heavily wooded area or flooded river bottom each come with a variety of known and unknown hazards. It is therefore important to gain knowledge from peers, books, training and personal experience so as to minimize risk to ourselves and to our environments.

Example: Hunters are required to wear Blaze orange

Laws and regulations are often developed to protect individuals and in the case of our environment, many laws seek to protect our finite and delicate natural resources.

Fair Chase:

Fair chase balances the skills and equipment of the hunter with the natural abilities of the animal being hunted. If practiced appropriately, fair chase will allow for the hunter to sometimes succeed in the taking of an animal but often allows for the animal to escape. The easiest way to explain fair chase is to define the word "fair." "Fair" is defined as being impartial and honest. Being fair means to be free of self-interest, prejudice, or favoritism. So, when considering fair chase while hunting, this would mean that we do not give ourselves an unfair advantage over the game we are hunting. Instead of using illegal or unethical methods to gain an unfair advantage, hunters are expected to learn about the game they are seeking to hunt through studying the animal's movements, tracks, feeding habits and more.

Example: Hunters are not allowed to chase or shoot wild game with assistance of a motor vehicle

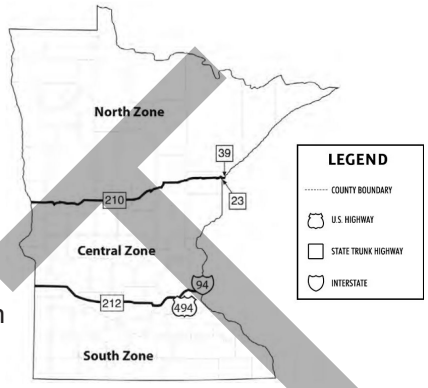
Is this a fair shot?

Opportunity and Fair Share:

In Minnesota, wild game is considered to be owned by each individual of the state and is no one's property until it is legally harvested by a legal and licensed hunter. Throughout time, animal behavior and populations have been observed and hunting seasons have been developed to provide hunters and trappers with the best opportunities to harvest game. The Minnesota Department of Natural Resources monitors game and fish populations to set appropriate limits to ensure healthy and sustainable carrying capacities for each species.

Example: In Minnesota there are three different zones to hunt waterfowl that go along with migration patterns. Waterfowl zones in the south part of the state start later in the season to accommodate the time it takes for migratory waterfowl to reach the area.

Regular season Duck and Goose Zones



Protect Wildlife/Conservation of Resources:

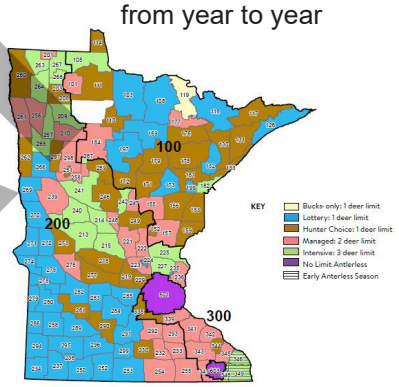
The Minnesota DNR tries to establish a healthy balance between opportunity and conservation. Wildlife resources are finite and can be drastically impacted by human behavior. That is why it is important to appropriately manage these resources through size restrictions, open and closed seasons, quotas, zones and limits.

Each animal population has a level at which it is most healthy and sustainable. This is known as a carrying capacity. A healthy carrying capacity for a wildlife population is one where there are enough resources available for every animal in that population to thrive, such as food, water and access to shelter. Similar to humans, animals must also have access to food, water and shelter to survive.

In this case, seasons and limits are set up to ensure that game populations are not drastically impacted in a way that could cause extinction, but seasons and limits also help to prevent over-population. Over-population can also be threatening to wildlife because it promotes disease and depredation to certain plants and areas of shelter.

2018 Deer zone map

* Check each year what zone you are hunt in as the zones can change from year to year



Example: Minnesota dear seasons and zones. In Minnesota there are several different zones for deer such as lottery, management, hunters choice, bucks only and intensive, and no limit anterless.

Can you think of other regulation examples that fit with each of the four reasons for hunting laws?

Developing a personal code of Ethics

Objective 3

- Explain why developing responsible hunting behavior is important for every hunter and the future of hunting

Responsible hunters develop a personal hunting code of ethics that governs the way they hunt. It is the way they act when the time comes to make a hunting decision. Responsible hunters improve public opinion of hunters and protect the future of hunting by being:

Courteous

Thoughtful

Respectful

Responsible

There are four steps to promote Ethical and Responsible Hunting

1. Respect Yourself

- Learn all you can about your environment and the game you seek to hunt
- Study and understand game laws in your area and follow those rules
- Practice with your firearm or bow prior to setting out to hunt
- Plan and prepare for your hunt
- Do not drink or do drugs while hunting or handling a firearm
- Ensure you have the proper licenses and possess them while hunting

2. Respect Others

- Never intentionally interfere with another hunter's hunt
- Avoid foul language and act professional
- Do not purposefully display harvested game in an area that could offend non-hunters; like on the hood of a motor vehicle
- Do not dispose of animal entrails in an appropreate area
- Always ask permission before hunting on property that does not belong to you
- Ask permission well before the open of the hunting season
- Always follow the rules of the landowner; stay in designated areas, do not litter, leave the area better than you found it, and do not open any gates or fences without permission
- Offer a portion of your harvested game to landowners
- Offer to help landowner with chores

3. Take Responsibility for Your Actions

- Don't turn a blind eye to game violations; report them to a Conservation Officer or local law enforcement
- Understand that your individual actions can influence how non-hunters view the entire hunting community
- Admit when you've done something wrong
- Utilize your harvested game and practice good field dressing techniques so as to get the best use of your game
- Pass on shots that are unsafe or when you aren't certain of your target
- Do not litter or destroy property
- Stay on designated trails, obey "No Trespassing" signs and ask permission to enter private property

4. Respect the Resource

- Take accurate and humane shots that maximize the potential of a quick kill shot
- Always obey local laws
- Eat and share all harvested game so it is not wasted
- Only take and post photos of harvested game in a tasteful manner

What do you think?

What percentage of the U.S. is pro-hunting? _____

What percentage of the U.S. is anti-hunting? _____

What percentage of the U.S. is neutral?_____

Permission to Hunt

What questions would you ask a landowner if you wanted to hunt on their property?

Responsible hunters improve public opinion of hunters and protect the future of hunting by being:

• Courteous •Thoughtful • Respectful • Responsible

The Progression of a Hunter

Objective 4

- Describe the five different stages of hunters

As hunters age and gain experience they find satisfaction in different aspects of the hunt. For beginning hunters, it's often getting a lot of shooting in or reaching their bag limits.

As they continue hunting, they will likely become interested in special methods of taking game such as bow hunting or muzzleloading. They may even become trophy hunters, interested in taking the largest tom or buck possible while passing up smaller animals.

As a hunter it is likely that you will experience a change in reasons and motivations for hunting. Two professors at the University of Wisconsin-LaCrosse, professors Bob Jackson and Robert Norton, conducted research in the 1970s which highlighted the 5 stages of a hunter.

- **Shooter Stage**.

During this stage the hunter experiences the greatest feelings of reward when shooting at game or firing their firearm or bow.
For hunters in this stage, the gauge of success is getting to pull the trigger as much as possible. A hunter actually succeeding in harvesting the game they are shooting at is not as high of a priority during this stage as the motivation to just being able to shoot their weapon of choice. It has been noted that this stage is ripe for safety violations because of the inexperience of the hunter. Safety should always be a top priority.

- **Limiting-Out Stage.**

Once a hunter has reached this stage their goal has shifted from just simply shooting their weapon to actually harvesting their legal limit. In this stage a hunter feels successful after they have managed to take their legal allowable amount of game. In this stage it is important to remember that safety is still the number one priority and hunters should not push their safety or capabilities simply to reach their bag limit.

- **Trophy Stage**.

In this stage of the hunter, the goal and mark of a successful hunt is harvesting game which the hunter marks as their personal best. This may also be marked by a hunter who is seeking a specific species such as in duck hunting. During this phase a hunter seems to have evolved their mindset towards more patience and skill.

- **Method Stage.**

At this stage the hunter has advanced in their skills and now seeks success in hunting through a mastery of their abilities. Hunters in this stage feel achievement from "how" they managed to harvest their game versus "what" or "how much" game.

- **Sportsman or Sportswoman Stage**.

At this stage a hunter derives enjoyment from the totality of the hunt. That means that the hunter feels joy and satisfaction from all parts of the hunt, not just the harvesting of game. At this stage a hunter's sense of community and partnership with other hunters is what gives he or she enjoyment. At this stage many hunters have ample knowledge and often turn to mentorship for youth or new hunting enthusiasts.

Most hunters reach the point where their main interest is passing on the hunting tradition and spending time in the field with friends and family.

Preparing for the Hunt

Objective 5

- Explain the importance of personal preparedness when outdoors
- Locate information regarding hunting regulations by using an official resource

A successful hunt is not dependent upon achieving your limit or even bagging a trophy animal. A successful hunt is much more than that. It takes preparation; not just physically but mentally as well.

Preparation is also important for reducing the likelihood of injuries and emergencies while hunting. Additional steps a hunter can take before going on a hunt is to stay physically fit and active. This can help prevent heart attack or other fitness-related injuries and illness. While on a hunt it is important to carry medications needed for known medical conditions as well as a basic first aid kit for treatment of injuries in the field. Hunters should also be aware of weather conditions so as to be properly dressed and prepared for harsh weather conditions.

Aside from planning and preparing for a hunt it is important to know the rules and regulations before setting out on a hunt. Hunters can reference a number of resources to acquire the rules and regulations. For instance, in Minnesota, many gas stations, bait shops, hunting outfitters and the DMV have printed booklets with each year's hunting regulations. This same publication can be found on the MNDNR.GOV website. These resources will provide information on how to obtain a license, hunting seasons and dates, legal hunting methods, equipment requirements, bag limits, transportation restrictions, permits and stamp requirements and trespass laws.

How do you prepare for the hunt?

List steps you would take to have a successful hunt:

1.

2.

3.

4.

5.

Student worksheet

1. List four reasons why there are hunting laws:
    1.
    2.
    3.
    4.

Using the most current Minnesota Hunting and Trapping Regulations handbook find the answers to the following questions. Some of the answers may be found on multiple different pages in the regulations handbook.

2. What do you need in order to go deer hunting at age 12? Age 13? (Found on page___)

3. Who must have a hunting license to hunt small game? (found on page(s) _____)

4. When must a hunter wear blaze orange/blaze pink? (found on page(s) _____)

5.What are the regulations for tagging and transporting big game? (found on page(s) _____)

6. What are the regulations for tagging and transporting small game? (found on page(s) _____)

7. What are the regulations for transporting a firearms in a motor vehicle? (found on page(s)_____)

8. Explain the Minnesota trespass law and the penalties for its violation. (found on page(s) _____)

9. What is TIP and how can it be used? (found on page(s) _____)

Habitat and Wildlife

Objective 1

- Describe habit for wildlife and its key components

Conservation requires wise use of wildlife resources. The resources Minnesota wildlife need to survive on are renewable. That means important and critical resources such as food, water and shelter are replenished naturally by the environment. These resources are not infinite. They will not support an unlimited number of animals, especially when man is competing for the same resources. They are necessary for the continued survival of wildlife.

Habitat

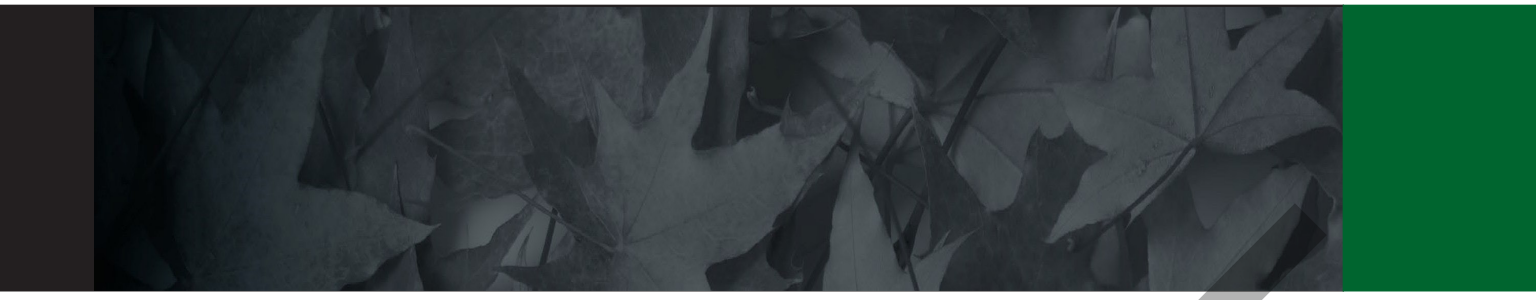
People value wildlife not only as part of their quality of life, but for the contribution it makes to Minnesota tourism, recreation, hunting and fishing. In order for a species to thrive, it must have good habitat available.

- Habitat consists of food, water, cover, space and arrangement to support wildlife.
- Habitat can be found in grasslands, meadows, forests, wetlands and water.

If there is not enough food, water or cover in an environment for a species, or if the quality of the habitat is poor, then the numbers of that animal will decrease.

In Minnesota, 12 Million acres of public land is owned by the state, federal government, and counties.

MN DNR manages 5.6 Million acres for recreational uses, logging and protecting Habitat.



Basic Parts to Good Habitat

Food

All wildlife rely on either plants or other animals for food. Without proper nutrition, animals will starve and die, succumb to diseases, or fail to reproduce. The availability of food can vary depending on changes in the weather, and competition by human activities including increase in livestock foraging, planting crops, and new housing developments.

Water

Water is necessary for all living species. A species will quickly die without water. The amount of rainfall can affect the quality of the vegetation and therefore the population numbers of a species.

Cover

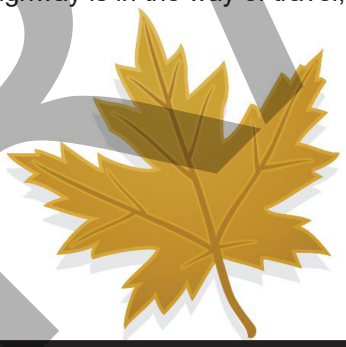
Cover is important for protecting and providing refuge for animals to reproduce, sleep, eat and hide from predators. Depending on the animal, cover can be in the form of trees, bushes, rocks, ground cover, burrows and other features of the environment.

Space

Suitable space allows animals to move about to search for food sources. Over population of animals in limited space brings disease and starvation due to lack of food.

Arrangement

The distance and obstacles between food, water, cover and space of habitat is seen as arrangement. Some animals may need to have all of these parts closer to each other than other animals. A mouse only travels half an acre to find all of these parts, while a white tail deer can travel a square mile or more. If one factor of a habitat is not available for an animal to reach or an obstacle like a highway is in the way of travel, the animal will need to move to a more suitable area.



Student Questions

In what type of habitat could you find a pheasant?

What is the most important thing we can do to ensure that we have wildlife in the future?

Carrying Capacity

Objective 2

- Describe how carrying capacity, biological surplus and limiting factors affect the size of a population

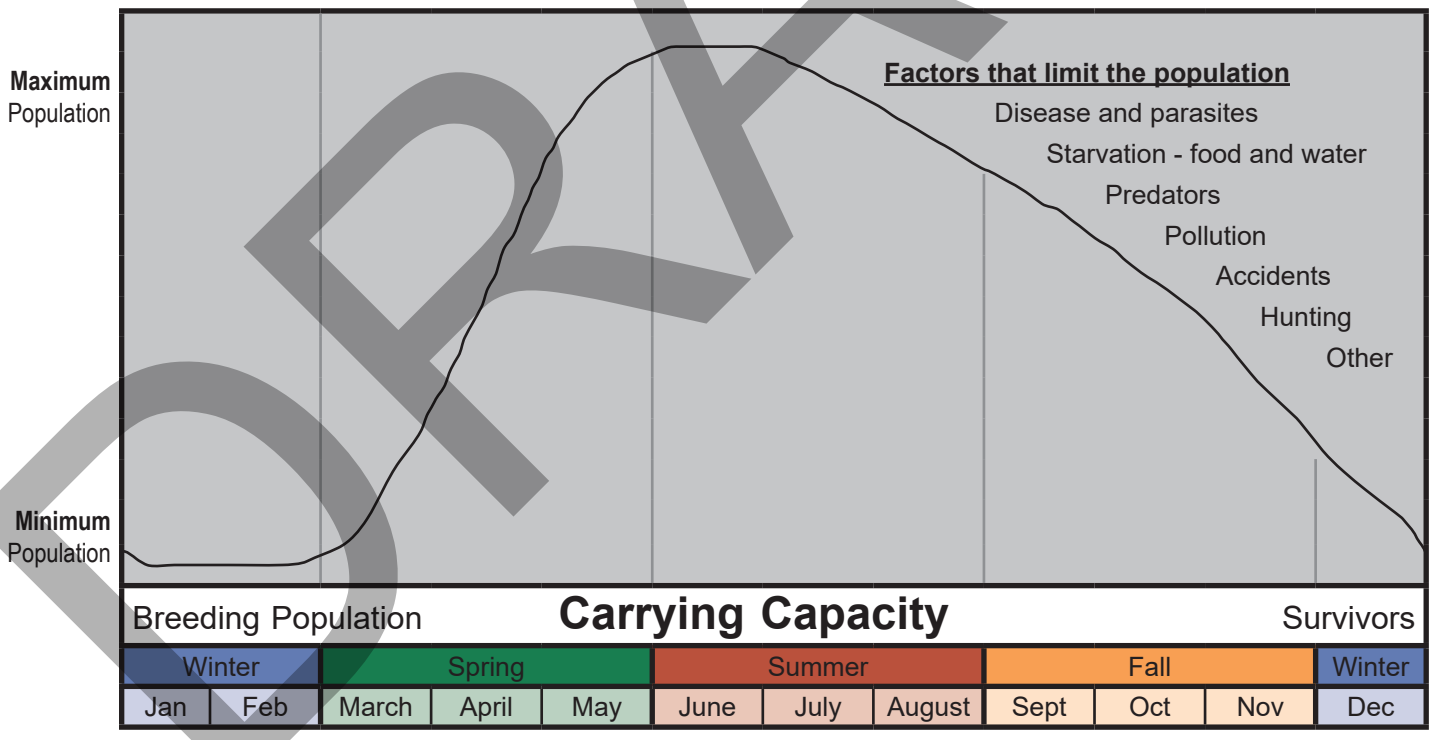
Carrying capacity is the amount of wildlife a habitat can support throughout the year. If there is enough food, water, space and cover for all members of the population to survive, reproduce and do well, then the number of animals is below or at the carrying capacity of the environment.

However, if animals are starving, do not reproduce or are generally diseased, then the number is above the carrying capacity of the environment. It's all a matter of balance!

Factors that limit the amount of wildlife

1. Disease/parasites
2. Starvation (food and water)
3. Predators
4. Pollution
5. Accidents
6. Hunting

Species reproduce annually or more often, replenishing their numbers or population. If a species reproduces so much that the number of animals is greater than the ability of the land to supply water, food, space and cover, the result can be disease and death. When the number of wildlife is greater than the carrying capacity, then wildlife begin to compete for food, water, space and cover. It is called a biological surplus. It can damage the habitat and drops the carrying capacity even farther. This is where hunting and trapping can help maintain nature's balance.



Wildlife Management tools

Objective 3

- Tools wildlife managers use to protect wildlife
- Name who is responsible for managing the wildlife in Minnesota

The first tool Minnesota wildlife managers use to keep wildlife at the carrying capacity of the land or environment is a sound management plan. Without proper wildlife management plans, many species or populations of wildlife in Minnesota would be in danger.

Managing the way people interact with wildlife is one of the most important tools wildlife managers use. When wildlife populations are high, hunters often have increased opportunities to harvest game. When populations are low then the harvest is less. Research and harvest surveys are also used as Wildlife Management tools. Managers keep data on numbers of species and the quality of the habitat each year in order to develop the best management plans.

Transplanting, protecting and conserving are management tools that have brought many species back from the edge of extinction. Without good management plans and the support of hunters and the public, many species would no longer be found in Minnesota.

An important management tool of wildlife biologists is education. Education helps hunters understand how wildlife management operates. If they understand it, the more likely they are to support management tools. The Minnesota Department of Natural Resources is the state agency responsible for managing wildlife in Minnesota. Minnesota's education programs provide citizens with the information, knowledge and skills necessary for conserving wildlife.

Law enforcement is an essential part of Minnesota wildlife management as it helps to ensure that everyone obeys game laws such as bag limits and season dates. One of the primary purposes of wildlife laws is to protect game animals from being over-harvested. Game and fish laws are enforced by state and tribal Conservation Officers. However, individual sportsmen are a crucial part of this effort. They should study and observe all game laws and report hunters who refuse to do so.

Surveys are conducted every year to see:

- How many animals can be harvested from a population
- The condition of the environment
- Trends in population numbers and habitat conditions
- Basic information on sex and age of animals harvested
- Social impact of wildlife and of hunting

The North American Model of Wildlife Conservation and the Hunter's Role

Objective 4

- Describe the central principles of the North American Model of Wildlife Conservation
- Explain how hunters play a role in wildlife conservation

Minnesota manages wildlife based on The North American Model of Wildlife Conservation.

There are two main principles: fish and wildlife belong to the people of North America and they should be managed in a way that their populations can be maintained forever. It is the world's most successful method; no other continent has as many of its native wildlife species still living. This is mainly because of the North American Model of Wildlife Conservation, which strives to sustain wildlife species and habitats through sound science and active management.

Interstate Wildlife Violator Compact

Minnesota, along with 48 other states, is a member of the Interstate Wildlife Violator Compact. Violations in any member state can result in the loss of hunting or fishing privileges in all the states.

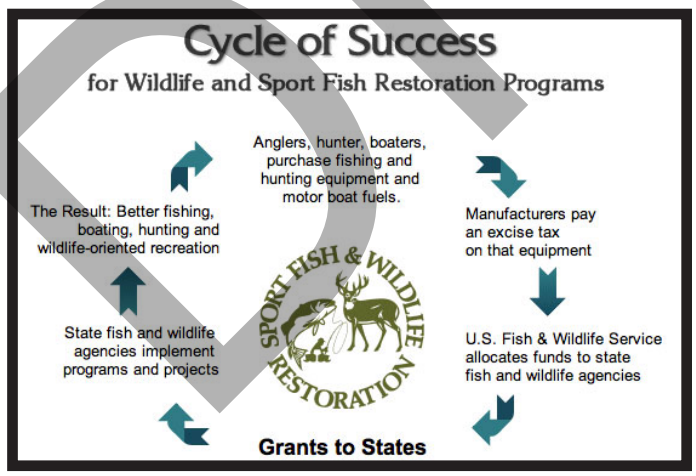
Hunting and angling make the North American Model of Wildlife Conservation work. These activities have generated more than $10 billion toward wildlife conservation since 1937.

Hunters and anglers actively support wildlife conservation by buying licenses and paying taxes on hunting and fishing equipment. Why are hunters and anglers so willing to support conservation? Because people value a quality hunting experience and are willing to pay for it.

Minnesota has some of the best outdoor opportunities in the country. Mother Nature gave us a uniquely diverse canvas, but world-class outdoor recreation exists because the state's anglers and hunters are passionate about the outdoors and support it with their time, commitment and dollars.

Another source of funding is the Wildlife & Sport Fish Restoration Program, which is funded partially by the Pittman-Robertson Act passed by Congress in 1937. This act established a special tax the federal government collects on all gun, ammunition and archery purchases to help wildlife.

Also, specific groups interested in wildlife raise money and work cooperatively with the Minnesota Department of Natural Resources to conserve and protect wildlife and habitat. Some examples would be Ducks Unlimited and Pheasants Forever.



Federal Aid in Wildlife Restoration

Minnesota's rich outdoor heritage is enjoyed by all. When you purchase a rifle, ammunition, archery equipment, and other sporting gear, you pay a federal excise tax and import duties. Since 1937, this money has been collected by the federal government and redistributed to the states using a formula based on hunting license sales and the state's land area. These funds support projects, habitat management, wildlife inventory and surveys, wildlife land acquisition and hunter education, recruitment and retention.

The Future of Minnesota Wildlife

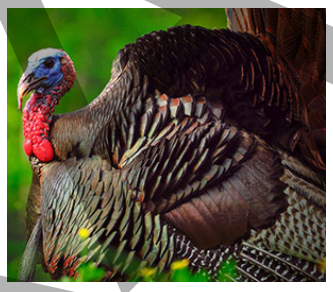
Wildlife in Minnesota belongs to the people of Minnesota. It depends on hunters, trappers, wildlife enthusiasts and the public who:

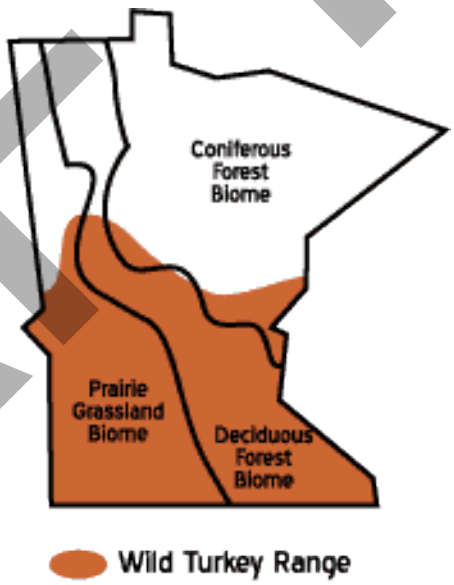
- Support programs that improve the habitat on both public and private lands.
- Educate the public about the importance of hunting and trapping as a management tool.
- Use only the highest ethical behavior when hunting and trapping so as not to damage public support.
- Contribute time and money to help wildlife.
- Realize that hunting and trapping are important management tools that benefit wildlife populations and their habitat.
- Take someone hunting.

A Minnesota example of restoration

The restoration of the wild turkey over the past 25 years is one of Minnesota's greatest conservation success stories. Caused by loss of forested habitat in the valleys of the Mississippi, Minnesota, Rock and Des Moines rivers and unregulated hunting, Minnesota's last native turkey was spotted in 1880. After several re-introduction attempts dating back to the 1920s, successful trap and transplant efforts began in 1971. A favorable habitat mix has pushed the wild turkey range well beyond its presettlement location, which was limited to southern Minnesota.

Today wild turkeys are becoming a common sight throughout southern, central and even northern Minnesota. The birds, which usually travel in flocks, are often seen in wooded areas next to farm fields and pastures. Minnesota's wild turkey population is expanding north and west. It has grown from just a few birds in the early 1970s to more than 70,000 today. The state has spring and fall hunting seasons, which have become very popular. Hunting is regulated to allow the wild turkey population to continue growing.





Wild turkeys can be seen throughout much of Minnesota, even more north than what is shown here.

Student Review

- Food, water, space, cover and arrangement are the five components that animals must have in an environment in order to survive.
- Carrying capacity is the amount of wildlife a habitat can support each year. When the amount of wildlife is greater than the carrying capacity, then wildlife begins to compete for food, water, and cover. This can damage the habitat and drop the carrying capacity even lower.
- A management plan, research and harvest studies, transplanting, protecting and conserving and law enforcement are all management tools used by wildlife managers.
- The sale of hunting and trapping licenses, money from the Wildlife & Sport Fish Restoration Program and money from private sources are the three main funding sources of Minnesota Department of Natural Resources.
- The Wildlife & Sport Fish Restoration Program provides a tax on firearms and ammunition in order to help fund state wildlife agencies.

Chapter 8

Personal Preparedness and Survival

Minnesota Hunter Education Program

Survival

Objective 1

- Describe the steps necessary to survive an emergency situation in the outdoors
- Identify reasons for preparing and following a hunt plan
- Identify items that should be included in every survival kit

Portions of Minnesota have large areas of remote forested lands including the Boundary Waters Canoe Wilderness Area. Taking a short cut through the forest or stepping off a well-traveled trail could end up with you being lost.

The most important thing to do when lost is to STOP and don't panic, remain calm and think before you act. When you are lost, typically all you have is what you brought along and the clothes on your back. As darkness nears, it is much more important to make a plan for staying warm and alive overnight than to try to find a way home. A person's attitude and emotional state can make all the difference in finding a way out of difficult situations.

Observe your surroundings and do not wander around. That is dangerous and can lead to disorientation and confusion. Plan on what to do next! A night in the woods, look for shelter and start a fire. When you use lots of energy while walking, climbing and running, your body requires more food and water. A person does not think as well when they are exhausted and stressed. So, relax and think about your situation before you react. As with any problem, the best way to solve it is to not have it happen in the first place. There are things you can do to prevent yourself from getting lost.

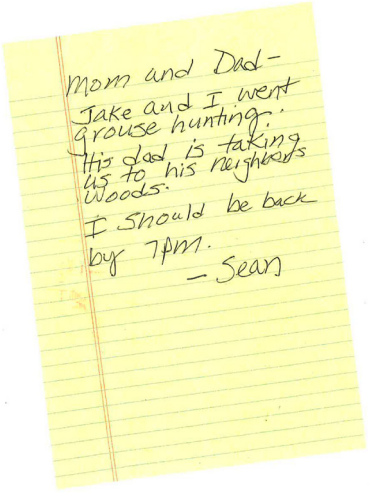
Preparation and Planning

Survival starts before you go out for any length of time in the outdoors. You should bring a survival kit every time you go hunting. The best survival kit will do you no good if it's left in your vehicle.

A hunter should prepare and follow a hunt plan in case they become lost, sick or injured. Leave your hunting plan with a friend or family member so searchers will know where to look. It should contain information on who you are hunting with, what you are hunting, where you plan on hunting and when you plan on returning. If you don't return at the right time, they can contact the authorities and launch a search party.

Map and Compass

The first thing to prevent you from becoming lost is to know how to use a compass and map. A topography map along with a good map compass can tell you exactly where you are. A good topographic map shows all details of a terrain – it shows roads, rivers, hills, elevation, and even trees and bushes.



How to use a compass.

The arrow of a compass points to Magnetic North. Magnetic north is not the same as True North, but it is relatively close. The farther east, or the farther west you go, you may have to adjust, or calibrate your compass for the error in what north really is. This error is called Declination.

The compass arrow, usually red, will point to north. The black end of the compass arrow will then point south. If you are facing north, west will be to the left, and east will be to the right. Be sure to hold the compass as level as you can when using it.

The Bezel Ring of the compass has 360 angle degrees (a circle) on it and is turnable. Zero and 360 degrees point straight north. If you want to follow your compass directly west, which is 270 degrees, you will turn the Bezel Ring to 270, or West, put the red arrow, inside the red line of the Bezel ring. You should now be facing west. This method is called “Red In The Shed”. It works for any direction you wish to travel.

The simplest of compass functions is the Safety Bearing. Basically, if you walk into a woods or any other area, and you are heading north, your safety bearing (or your way out) is south, the opposite direction you went in. North and south are opposite directions from each other, as well as east and west are opposite from each other. The key to using a Safety Bearing, is knowing which way was your first direction of travel! If you don’t know which way you started, you won’t know what the opposite direction is to get out. The Safety Bearing method may not bring you out to exactly where you went in, but it may get you back to some landmark you may recognize, such as a road or large trail.

Survival Kit

A survival kit should be adjusted for your needs, the time of year and the activity in which you will be engaged in. There are some basic items you should include when putting one together. A survival kit can be lightweight and compact, while including the items you need to survive a night or two in the outdoors. The following could fit in a quart, zip-lock bag and weights 10-12 onces.

Basic survival kits should contain:

- Shelter material (2 x 55 gallon garbage bags)
- Parachute line or braided rope
- Fire Starting Materials
  - Matches or lighter stored in a waterproof case
  - Vaseline saturated cotton balls in a waterproof container
- Signaling equipment
  - Plastic whistle
  - Signaling mirror - plastic or steel
- Folding knife
- Compass
- Food bar or trail mix
- Small LED flashlight

In addition, consider the following equipment for areas of remote traveling on foot:

- Additional clothing for warmth and protection from wind
- First Aid Kit
- Metal cup
- Flashlight with a headband and spare bulbs/batteries
- Water purification tablet
- Folding saw
- Plastic water bag
- Cell Phone/Satellite Phone or two way radio

Rule of 3's

A person can survive:

- 3 minutes without air
- 3 hours without shelter in severe weather
- 3 days without water
- 3 weeks without food

HUNTING TRIP PLAN

Always have a plan.

Tell someone where you are going and when you will be back

Hunter's Name _____ Age _____

Cell Phone Number_____

Hunting Companion _____ Age _____

Cell Phone Number_____

Hunting Companion _____ Age _____

Cell Phone Number_____

Medical Considerations_____

Emergency Contact _____ Phone Number _____

Additional considerations _____

_____

Destination/Location _____Phone Number _____

Route/Map_____

_____

Date and time of Departure_____

Date and time of Return_____

Game Hunted _____

Required License/Permits _____

Deer Ticks

Objective 2

- Tick prevention

Deer ticks, also known as black-legged ticks, are just one of thirteen known tick species in Minnesota. They are most common in the east and central areas of the state and are found in hardwood forests and wooded and brushy areas. Deer ticks are potential carriers of Lyme disease, human anaplasmosis and babesiosis.

The blacklegged tick, shown in the lower right, is much smaller than the American dog tick, shown in the upper right. The lone star tick is shown in the upper left of this photo and is a little smaller than the American dog tick but larger than the blacklegged tick

Risk Time frame

Primarily risks are from mid-May through mid-July when the smaller nymph stage of the deer tick is feeding. Risk is present, but lower, in early spring and again in the fall (late September-October) when the adult stage of the deer tick is active.

Deer tick prevention

- Check and re-check for ticks when you are in tick-infested areas.
- When in deer tick habitat, walk in the center of the trail to avoid picking up ticks from grass and brush.
- Wear light colored clothing so ticks will be more visible.
- Create a barrier to ticks by tucking pants into socks or boots and tuck long sleeve shirt into pants.
- Use a repellent containing DEET or permethrin, and carefully follow the directions on the container.
- After being outdoors in tick habitat, get out of your clothes immediately, do a complete body check, shower and vigorously towel dry. Wash your clothes immediately as to not spread any ticks around your living area.
- Pets should also be checked for ticks.

Tick removal

The risk of getting a tick-borne disease is small if the tick is removed soon after it becomes attached. Deer ticks must remain attached one to two days to transmit Lyme disease, and about one day for the other diseases.

- Use tweezers to grasp the tick close to its mouth.
- Gently and S-L-O-W-L-Y pull the tick straight outward.
- To avoid contact with the bacteria, if present, do not squeeze the ticks' body.
- Wash the area and apply an antiseptic to the bite.
- Watch for early signs and symptoms of Lyme disease.

First Aid and CPR

Objective 3

- Identify causes, symptoms and treatments of hypothermia and heat exhaustion
- State the importance of first-aid training for hunters

Knowing basic first aid and CPR can be helpful not only for you but for other members of your hunting party.

Hypothermia

Hypothermia is one of the biggest dangers to hunters during bad weather or near water. Hypothermia occurs when you get too cold for too long and your body's internal temperature drops. A person does not have to fall completely into water to get hypothermia. Just getting sweaty dampens clothing enough to allow the body to chill.

Dress for changing weather conditions:

- To avoid hypothermia do not wear cotton
- Wear layers of wool or synthetic clothing
- Wear a windproof/waterproof outershell

Hypothermia signs and symptoms:

- Uncontrollable Shivering (although, at extremely low body temperatures, shivering may stop)
- Weakness and loss of coordination
- Confusion
- Pale skin
- Drowsiness – especially in more severe stages
- Slowed breathing or heart rate
- Lack of judgment

Hypothermia can be fatal. Once the symptoms are noticed take the following steps to warm the body.

- Treat mild hypothermia by getting into a warm and dry area and away from wind and wet conditions as soon as possible. If you do get wet, change wet clothing for windproof, waterproof gear.
- Add heat slowly– if safe, start a fire
- Increase exercise, if possible
- Get into a pre-warmed sleeping bag or blanket
- Drink hot drinks, followed by candy or other high-sugar foods
- Apply heat to neck, armpits and groin
- Seek medical help if severe

Heat Exhaustion signs and symptoms:

- Cool, clammy pale skin
- Dry mouth
- Fatigue
- Weakness
- Dizziness
- Headache
- Nausea

Treatment for Heat Exhaustion

- Move victim to a cool or shady place
- Provide water or sports drinks
- Keep victim inactive
- Seek medical attention if severe

CPR and First Aid

Basic first aid and CPR skills are important when faced with an emergency out in the field. Just like a survival kit, it is important to have a first aid kit with you at all times. It should be small enough that you always carry it, but big enough to carry the basic tools needed in an emergency. Such common conditions that can occur while hunting are:

- Heart attacks
- Drowning
- Broken bones
- Cuts and bleeding
- Tree stand falls
- Burns
- Snakebites

List items in your first aid kit

Water Safety

Objective 4

- State the importance of wearing a personal flotation device (PFD) when hunting on the water

Boating

Hunters that use boats often think of boating and boat safety as secondary to their primary pursuit. You should keep in mind that safety starts long before you start hunting when boats are involved.

- Do not overload your boat.
- Keep the center of gravity low.
- Always wear a Personal Flotation Device (PFD) while you are in the boat.
- Stay with your vessel if it capsizes.
- Carry dry clothes in a waterproof sack.
- Take a boating safety course.
- Follow boating laws.

Personal Flotation Devices (PFD)

Every hunter who is on the water should wear a personal flotation device regardless whether he or she knows how to swim. Children and non-swimmers should always wear them when near water. If you do fall into the water while hunting, conserve your body heat by keeping your arms as tight to your chest as possible. Your legs should also be together and as near to your torso as you can get them. If you fall into the water with another hunter huddle together to conserve heat. Even the best swimmer can chill quickly and develop hypothermia in cold water.

Life Jacket Options

Hunting safety only takes a little bit of planning and preparation. A waterfowl life jacket can go a long way toward bringing hunters home. Life jacket designs have come a long way over the years and now come in a wide variety of styles and colors, including inflatables. Foam-filled life jackets keep you afloat and add extra insulation.

Use the H.E.L.P. Position

Reduce the effects of cold water immersion by assuming the Heat Escape Lessening Position (H.E.L.P.): Cross ankles and then cross arms over chest. Hands should be kept high on the shoulders or neck.

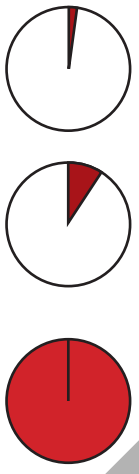
Draw knees to chest. Lean back and try to relax. This maneuver should be tried in a pool before depending on it in an emergency. Huddle up for warmth if more than one person is in the water and all are wearing life jackets. This is where small groups of two to four “hug” with chests closely touching. Arms should be placed around the backs of the others and kept underwater, while smaller individuals or children can be placed in the middle of the huddle. The huddle helps to conserve body heat and it is easier for rescuers to locate than one lone victim. Also, the close proximity of victims can serve as a significant morale booster.

If you do fall out or capsize, stay with your boat and try to re-board. Most capsized watercraft can still float. A boat in the water is much easier for rescuers to find.

Remember, victims of mild to moderate hypothermia may be suffering from impaired judgment and may not be making rational decisions. They might be more prone to accidents. If you are a victim of mild to moderate hypothermia, be extra cautious! Don't make a bad situation worse!

Cold Water

You Must Fight to Survive in Cold Water. Cold water immersion can kill in several ways, and most victims die before they become hypothermic. If you are wearing a life jacket, the 1-10-1 principle may save your life.



1 Minute
- Remain Calm.
- Get Breathing under control.

10 Minutes of meaningful movement
- Assess the situation and make a plan.
- Perform most important functions first
- Self-rescue if possible
- Deploy emergency communications and signaling

1 Hour (or more) of useful consciousness
- Focus on slowing heat loss

Invasive Species

While not part of personal preparedness and survival, you as a hunter are responsible for the survival of Minnesota's lands and waters. Part of your responsibility is to identify invasive species and stop the spread of them.

Invasive species are species that are not native to Minnesota and cause economic or environmental harm or harm to human health. Minnesota's natural resources are threatened by a number of invasive species such as zebra mussels, Eurasian water milfoil, common buckthorn, and emerald ash borer. Invasive species can occur on land or in the water.

Aquatic Invasive Species

It is illegal to transport aquatic plants, zebra mussels, snails or other prohibited invasive species in or on boats, trailers, or other equipment such as decoys and waders. Waterfowl hunters may use emergent aquatic plants, such as cattails and bulrushes, cut above the waterline, for building blinds or camouflage.

Clean aquatic plants, animals and mud from your boat, trailer, waders or hip boots, push poles, clothing, decoy and lines, dogs and ATV or truck.

Drain all water from boats and equipment and leave drain plugs out when transporting.

Dry everything for at least five days before hunting in other waters.

Protect waterfowl and habitat by helping stop the spread of zebra mussels, faucet snails, Eurasian watermilfoil and other aquatic invasive species (AIS).

Terrestrial (Land) Invasive Species

Just like aquatic invasive species, it is just as important to not transport terrestrial invasive species while hunting.

Remove plants, animals and mud from boots, gear, pets & vehicle.

Clean your gear before entering and leaving the recreation site.

Stay on designated roads and trails.

Game Care and Retrieval

Objective 1

- Explain the importance of proper game retrieval and game care

Ethical and responsible hunters never waste a game animal and properly care for the meat immediately after the kill.

Proper care starts with the first shot. As mentioned earlier, responsible hunters strive for clean, one shot in the vital areas. How you hunt an animal and how you immediately care for it affects the taste of the meat. An animal that is shot while resting will not have a gamey taste, while an animal that is chased for a distance will secrete waste products into the muscles that affect the taste of the meat.

A large piece of hunting and hunting ethics also revolves around the retrieval of game. Hunting is not just the act of shooting you are hunting but also retrieving that animal and putting it to use. There are steps to consider when tracking and retrieving game. First, it is important to wait before immediately trailing or retrieving game. During that time observe every movement of the game animal after you shoot it. Once at the shot site look for signs such as blood on the ground or vegetation, broken twigs, branches or scattered leaves. If it is early in the morning you may be able to spot a “dew” line where the animal ran. You may also see tracks, hair, meat or bone fragments. A good place to look is on downward trails, especially those that lead towards water.

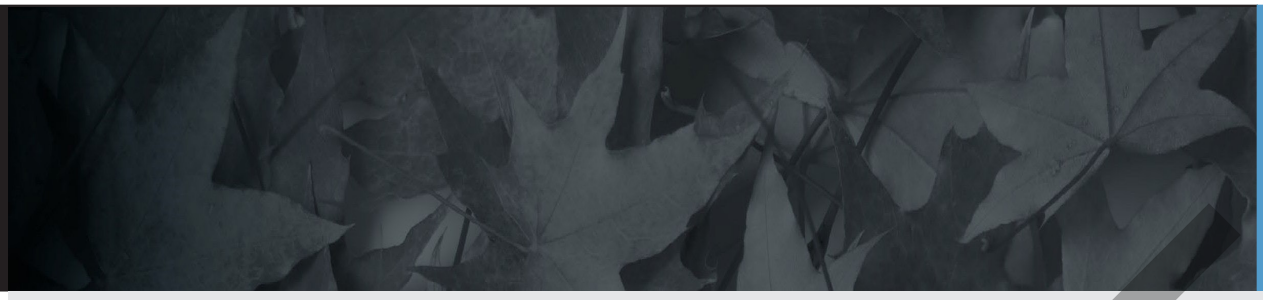
When a downed animal is located it is important to approach with caution from above and behind the head. When observing the animal check the animals’ eyes, as the eyes of a dead animal are normally open. If the animal is still alive you should finish the animal with a well-placed, lethal shot. Once the animal is dead follow the state’s guidelines for reporting or recording the kill. For instance, in Minnesota, once you have shot and killed a deer you must immediately validate the site tag that comes with your license. And finally, begin your field dressing process so as to not risk spoilage.

Once a deer, bear or turkey has been harvested, you must validate the tag before moving it. You will indicate the date and time of the kill. Conservation Officers will want to know the species and sex of animals that you shoot.

Time is of the essence

Once you’ve tagged the animal, you need to do two things quickly to prevent the meat from spoiling – field dress it and cool the meat. Meat that has been kept cool, dry and clean tastes better than meat that has been allowed to get warm, wet and tainted with dirt.

- Meat should be kept cool by:
- Keeping it in the shade.
- Keeping it in open and exposed to circulating air.
- Hanging it from a tree or post.

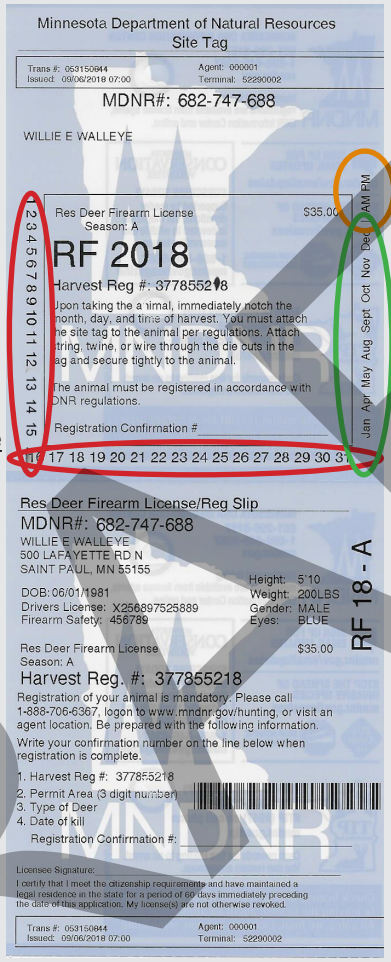


To Validate your tag once you locate your game notch out these three things

Notch out AM or PM

Notch out the Month

Notch out the date



Minnesota Department of Natural Resources
Site Tag

Trans #: 053150844
Issued: 09/06/2018 07:00
Agent: 000001
Terminal: 52290002

MDNR#: 682-747-688

WILLIE E WALLEYE

Res Deer Firearm License $35.00
Season: A

RF 2018

Harvest Reg #: 377855218

Upon taking the animal, immediately notch the month, day, and time of harvest. You must attach the site tag to the animal per regulations. Attach string, twine, or wire through the die outs in the tag and secure tightly to the animal.

The animal must be registered in accordance with DNR regulations.

Registration Confirmation #

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Jan Apr May Aug Sept Oct Nov Dec AM PM

Res Deer Firearm License/Reg Slip

MDNR#: 682-747-688
WILLIE E WALLEYE
500 LAFAYETTE RD N
SAINT PAUL, MN 55155

DOB: 06/01/1981
Drivers License: X256897525889
Firearm Safety: 456789

Height: 5'10
Weight: 200LBS
Gender: MALE
Eyes: BLUE

Res Deer Firearm License $35.00
Season: A

Harvest Reg. #: 377855218

Registration of your animal is mandatory. Please call 1-888-706-6367, logon to www.mndnr.gov/hunting, or visit an agent location. Be prepared with the following information.

Write your confirmation number on the line below when registration is complete.

1. Harvest Reg #: 377855218
2. Permit Area (3 digit number)
3. Type of Deer
4. Date of kill

Registration Confirmation #:

RF 18 - A

Licensee Signature:

I certify that I meet the citizenship requirements and have maintained a legal residence in the state for a period of 60 days immediately preceding the date of this application. My license(s) are not otherwise revoked.

Trans #: 053150844
Issued: 09/06/2018 07:00
Agent: 000001
Terminal: 52290002

Three environmental factors affect the taste of your meat:

- Temperature
- Dirt
- Moisture

Field Dressing

Objective 2

- Describe how to effectively field dress a deer

Field dressing is simply removing the entrails. It prevents the meat from absorbing waste products from the body cavity organs.

Who's watching?

Never transport a carcass of a large animal on the hood of a vehicle. The heat will spoil the meat. Hunters need support from the public. An animal's carcass in plain view can potentially offend non-hunters. Cover it with canvas or place it in a closed area inside the vehicle. Always be respectful and thoughtful on the opinions of others.

Field dressing can be messy so remove any heavy coats and roll up your sleeves. Blood and digestive juices from organs possibly penetrated by the shot must be removed from the body cavity quickly. Organs deteriorate rapidly so remove them quickly. The faster they are removed, the faster the meat will cool and the better it will be preserved. Field dressing will eliminate quite a bit of weight so it is better to field dress the animal before you transport it.

Remember that it is important to keep dirt and foreign objects away from the exposed body cavity. Removing the scent glands is not considered necessary but if you wish to do so, be careful as they can taint the meat if broken or smeared on the carcass.

Jerry Shaw

Basic Field Dressing Tools

Perhaps the most important tools you can carry for field dressing are a sharp knife and a good sharpener. These will be the primary implements you use for skinning and cleaning carcasses. Other tools you might include in your field dressing bag are:

- Rubber gloves
- A small axe or saw for cutting through bone.
- Rope for tying the carcass together or dragging it.

Jerry Shaw

Steps in Field Dressing

Roll the deer carcass over on its back with the rump lower than the shoulders and spread the hind legs. First make a cut along the center line of the belly from the breastbone to the base of tail. Cut through the hide, then through the muscle of the belly area.

Avoid cutting into the stomach and intestines by holding them away from the knife with the free hand, while guiding the knife with the other.

Note: Unless the deer head will be mounted, the cut should pass through the sternum and extend up the neck to the chin to allow removal of as much of the windpipe as possible.

Jerry Shaw

With a small sharp knife, cut around the anus and draw it into the body cavity, so it comes free with the complete intestines. In doing this, avoid cutting the bladder. Loosen and roll out the stomach and intestines. Split the pelvic bone to accelerate cooling. Cut around the edge of the diaphragm, which separates the chest and stomach cavities, and split the breastbone.


Jerry Shaw

Then, reach forward to cut the windpipe and gullet ahead of the lungs. This should allow you to pull the lungs and heart from the chest cavity.

Drain excess blood from the body cavity by turning the body on its side or hanging animal head down. All parts damaged by gunshot should be trimmed away. Prop the body cavity open with a stick to allow better air circulation and faster cooling.

A clean cloth may be useful to clean your hands. If you puncture the entrails with a bullet or your knife, wipe the body cavity as clean as possible or flush with water and dry with a cloth. Don't use water to wash out the body cavity unless the stomach or intestines are badly damaged.

Veteran hunters may have variations in the steps of field dressing. The important points are to remove the internal organs immediately without contaminating the body cavity with dirt, hair, or contents of the digestive tract and to drain all excess blood from the body cavity.

If the weather is warm or if the deer is to be left in the field for a day or more, it may be skinned, except for the head, and washed clean of dirt and hair. Adequate cooling may take six hours or more, depending on weather conditions.

Aging the Meat

Age the deer carcass in a cool, dry place. Aging of a well-cared for carcass in correct temperatures makes for better flavored, more tender meat. Best results are obtained in a near-constant temperature, preferably from 34 to 36 degrees Fahrenheit.

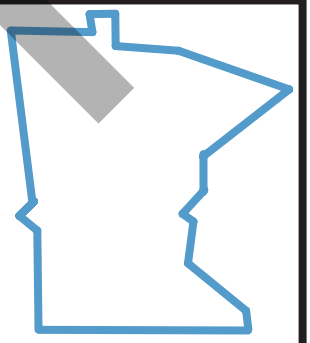
Aging for one to two weeks is about right for the best quality venison, depending on the age and condition of the animal.

Disposal of entrails and carcass

Never leave the waste remains out where other people may see them. Remember that the public land you hunt is often used for other purposes. People will be offended if they find the unused parts of a game animal.

Careless behaviors such as this can result in poor public opinion of hunting and end up damaging the sport and hurting your opportunities to participate in the future.

MN Law: Whoever unlawfully deposits garbage, rubbish, cigarette filters, debris from fireworks, offal, or the body of a dead animal, or other litter in or upon any public highway, public waters or the ice thereon, shoreland areas adjacent to rivers or streams, public lands, or, without the consent of the owner, private lands or water or ice thereon, is guilty of a petty misdemeanor.



Words to know

Game Care: The process of taking care of the meat immediately after an animal has been harvested.

Field Dressing: A method of cleaning a dead animal to preserve the meat.

Carcass: Body of a dead animal.

Entrails: Waste products left over from field dressing.

Aging Meat: A method of tenderizing meat.

Wildlife Identification

Objective 1

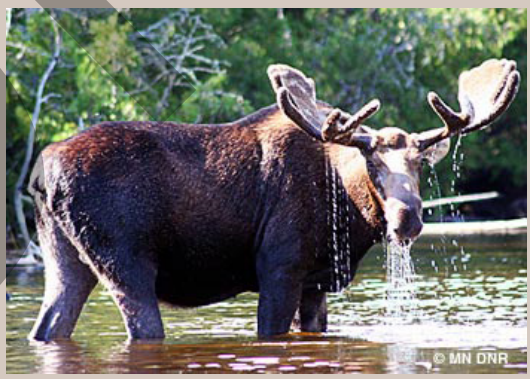
- Explain the importance of wildlife identification skills for hunting.
- Identify game species and their distinguishing features.

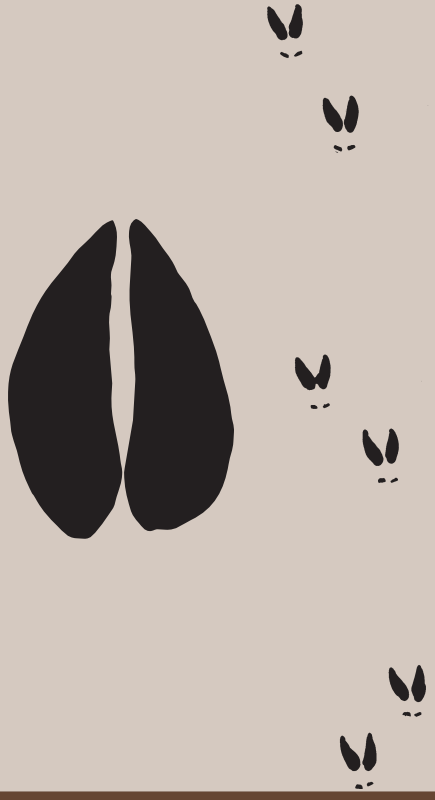
Proper game identification is a must for ethical hunting. Failure to identify your targeted species or sex of the specific species being pursued can result in loss of hunting rights and fines and can also put a negative view on hunting in general. Sportswomen, Sportsmen and various groups throughout the country have worked hard to ensure a favorable view on hunting, so please do your part by correctly identifying the species or sex of the species you are targeting. Proper wildlife identification also prevents accidental shooting where people are mistaken-for game.

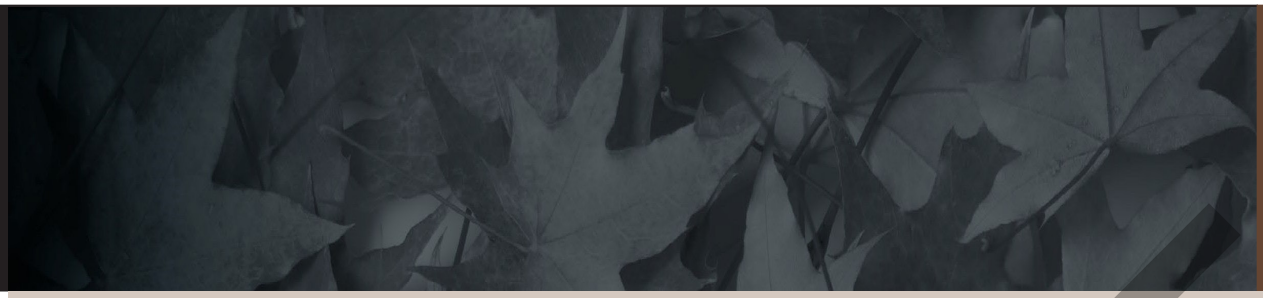
Big Game

Minnesota has various big game animals. Most of these animals are in the deer family. They include Elk, Moose, and Whiltetail Deer. Occasionally a Mule Deer will migrate into the state, but they are not common. The males in this group are all antlered animals, and lose their antlers every year and grow new ones. Another big game animal in Minnesota is the Black Bear. The Black Bear will come in 3 color phases; black, chocolate, and cinnamon. No matter the color, they are still considered a Black Bear. The bear has a varied diet and will eat almost anything. Bears hibernate in the winter.

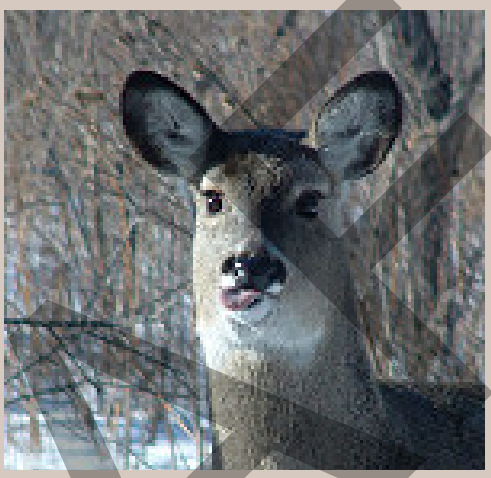
Moose
Located in the northeast portion of the state.
Height ranges from 4½ feet to 6½ at the shoulder.
Weight from 420-1,000 lbs.







Whitetail Deer
Can be found in all portions of the state.
Height is around 3 feet high at the shoulder.
Weight between 100-500+ lbs.



Elk
Located in the Northwestern part of the state. Height ranges from 4 to 5 feet at the shoulder.
Weight from 420 lbs. to 1,000 lbs.

Black Bear
Are typically found in the northern third of the state
Bear height ranges from 5-7 feet when standing on hind legs.
Weights from 100-500+ lbs.

Small Game

Small game is made up of many different types of animals. Small mammals, upland game birds, waterfowl and furbearers.

Small mammals consist of squirrel and rabbits. The squirrels may be Fox Squirrels, or Gray Squirrels. Rabbits in Minnesota consist of Cottontails, Snowshoe Hares, and Jackrabbits. They reproduce rapidly and become a food source for many predators, as well as hunters.

Furbearers cover a number of types of animals, including Red Fox, Gray Fox, and Coyotes, in the canine or dog family; Bobcats in the feline or cat family; Fisher, Pine Marten, Weasel, Mink and Otter in the Weasel family; Beaver; Raccoon; Muskrat. Many of these animals are typically harvested for their pelts, and members of this family are also considered small game.

Gray Wolf
Found in the northern third of the state.
2-3 feet tall at the shoulder and weighs 65-125 lbs.

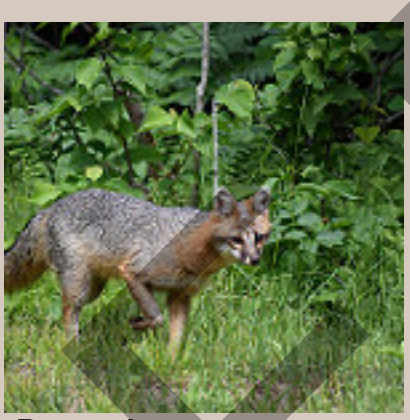
Coyote
Found in all portions of the state.
16 inches to 2 feet tall at the shoulder and weighs 20-35 lbs.

Bobcat
Found in the northern third and eastern sections of the state down to the Iowa border.
18-24 inches tall at the shoulder and weighs 15-32 lbs.

Lynx
Found in the Arrowhead region and very northern part of the state.
20-30 inches tall at the shoulder and weighs 20-35 lbs.

Red fox
Found in most parts of the state.
12-15 inches tall at the shoulder and weighs 8-15 lbs.

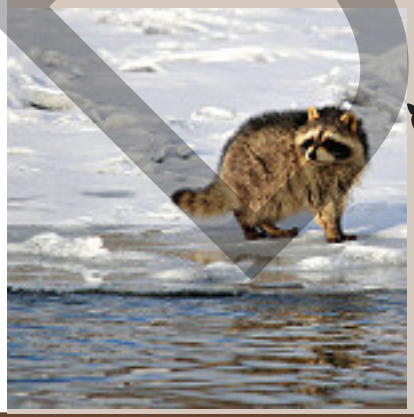
Gray fox
Can be found in many parts of the state.
12-15 inches tall at the shoulder and weighs 8-15 lbs.



Skunk
Found in most parts of the state.
Weighs 5-10 lbs.

Porcupine
Found in many parts of the wooded portions of the state.
Weighs 12-32 lbs.

Raccoon
Found throughout the state.
Weighs 10-35 lbs.



Opossum
Found in all parts of the state except the extreme northeast.
Weighs 5-15 lbs.

Beaver
Found in waterways across the state.
Weighs 25-60 lbs.

Muskrat
Found in most waterways of the state.
Weighs 2-4 lbs.

Otter
Found in waterways across the state.
Weighs 8-20 lbs.

Cottontail Rabbit
Found across the state.
Weighs 2-4 lbs.

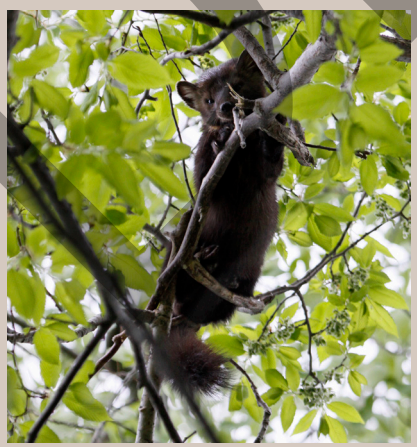
Snowshoe Hare
Located in northern portions of the state.
Weighs 2-4½ lbs.

Red Squirrel
Found mainly in conifer forests.
Weighs 1/8 to 1/4 lbs.

Gray Squirrel
Same locations as fox squirrels
Weight a bit smaller ¼ to ½ lbs.

Fox Squirrel
Located in the bottom two thirds of the state in hardwood forests.
Weighs ¼ to ¾ lbs.

Pine Marten
Found in extreme northern part of the state and the Arrowhead.
Weighs 1 ½ to 3 ½ lbs.



Fisher
Found in northern half of the state.
Weighs 4-8 lbs.

Game Birds

Upland game birds are birds that most resemble poultry. Incuded in this family are Ruffed Grouse, Spruce Grouse, Prairie Chicken, Sharptail Grouse, Ring-necked Pheasant, and Eastern Wild Turkey. Quite often the males will be very brightly colored, while the hens are drab colored to help them avoid predators while tending their nest.

Waterfowl are birds in the duck and goose family. There are many species of ducks, broken down into diving ducks and puddle ducks. Diving ducks prefer bigger, more open bodies of water, and can dive for their food to great depths. The puddle ducks generally prefer smaller, shallower water and tip their bodies on the surface to feed. Canada geese have the characteristic “Honk” we can hear. The males and females look the same, and they generally prefer shallower water. They may be seen commonly feeding in grain fields. Snow geese assemble in large flocks and may be either white or blue and white patterns.

Turkey

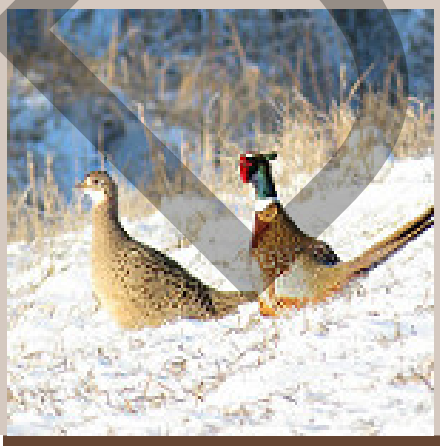
Found in many portions of the state and are starting to show up in locations of the northeast part of the state. Males and some females grow “beards” which typically come out just above the breast area.

Weighs 12-30 lbs.

Ring-necked Pheasant

Typically not found in the northeastern part of the state.

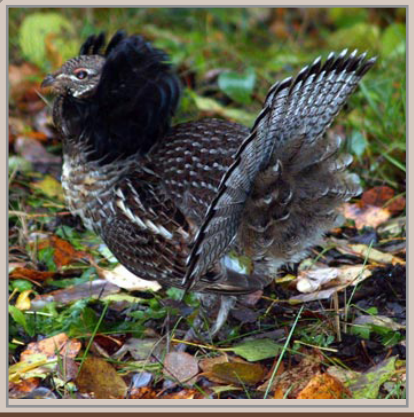
Weighs 2-3 lbs.



Ruffed Grouse

Found in timberlands and conifer forests.

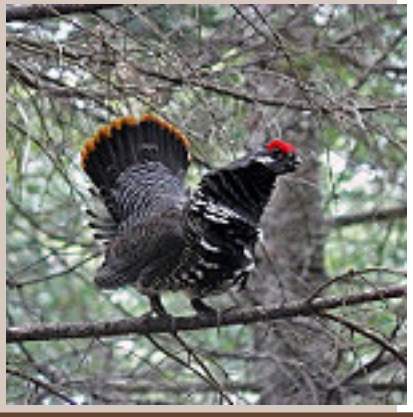
Weighs ½ to 1lbs.



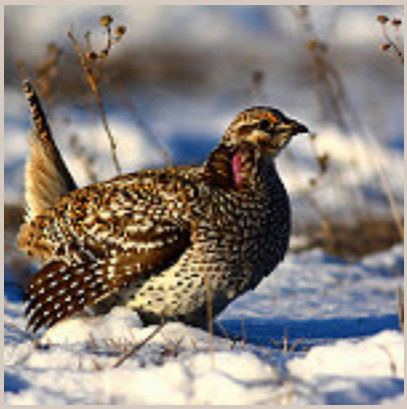
Spruce Grouse

Found in large conifer forests of the northeast portion of the state.

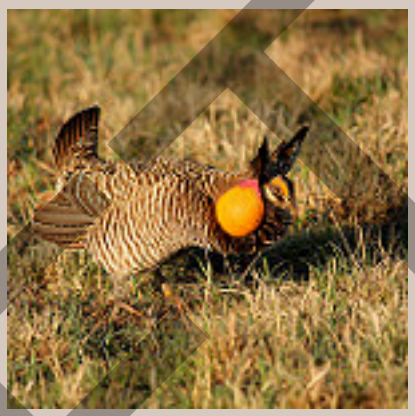
Weighs ½ to 1 lbs.



Sharp-tail Grouse
Found in few open prairies in the central portion of the state.
Weighs ½ to 1 lbs.



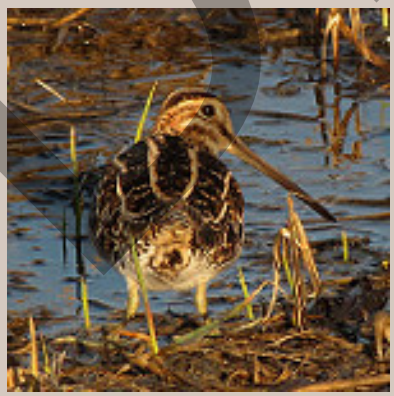
Greater Prairie Chicken
Found in open prairies of the northwest part of the state.
Weighs 1- 2 lbs.



Crow
Found in almost all parts of the state.
Weighs up to ¾ lbs.

Mourning Dove
Found in most parts of the state.
Weighs up to 1/3 lbs.

Snipe
Found in swamps, bogs, open wetlands.
Weighs ¼ lbs.



Woodcock
Found in forested and wetland forested areas around the state.
Weighs ¼ lbs.

Non-game Birds

Great horned owl
Can be found throughout the state.
Wingspan up to 3 feet

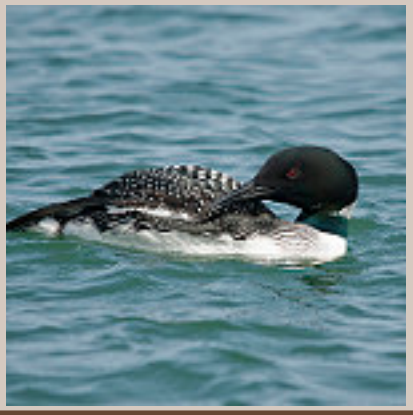
Osprey
Live near and found next to many large bodies of water in the state. Wingspan up to 6 feet.

Red-Tailed Hawk
Can be found in most portions of the state.
Wing-span up to 4 ½ feet.

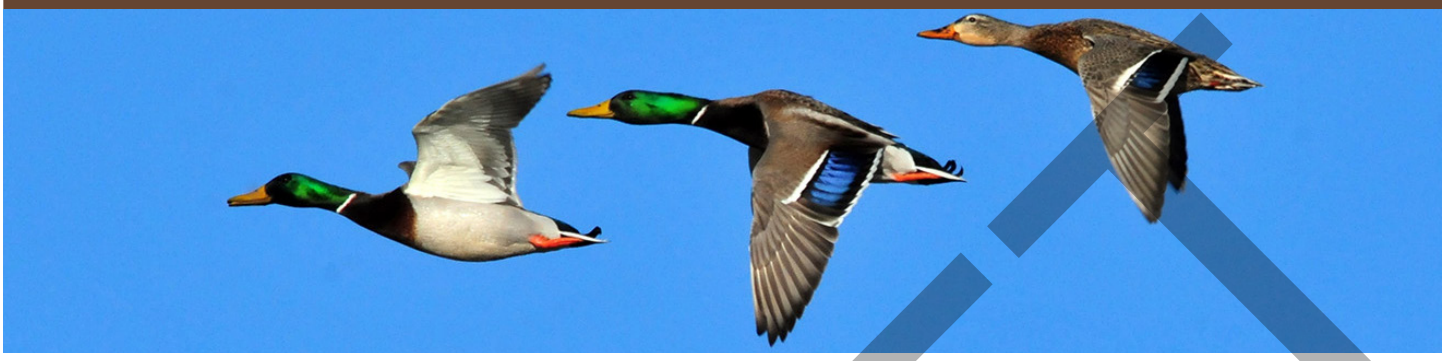
Golden Eagle
Can be found in some portions of the state.
Wingspan of 7 ½ feet.

Bald Eagle
Can be found throughout Minnesota.
Wingspan of up to 7 ½ feet.

Common Loon
Can be found in all of Minnesota's lakes and some large riverways.
Weighs 4-8 lbs.



Waterfowl ID



Waterfowl hunting in Minnesota and North America requires hunters to properly identify waterfowl before they are harvested. Sometimes different types of ducks will fly together in a single flock; most types of ducks and geese will use the same waterways in Minnesota. Proper waterfowl identification must occur while the ducks and geese are in flight and prior to the point of shooting and harvest. Hunters are sometimes only allowed to take one or two hens (females) of a species but are allowed to take more drakes (males) of the same species. In some situations certain types of ducks have been restricted to no harvesting of the species due to low populations and other factors.

Each state makes its own regulations in regards to season dates, waterfowl limits and how many of each sex/species can be taken. The guideline for these limits are set forth by the U.S. Fish and Wildlife Service which is part of the United States Department of Interior. States cannot exceed these limits but can be more restrictive.

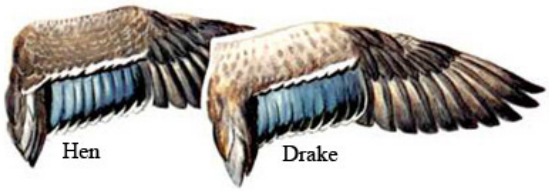
Minnesota waterfowl regulations are printed separately from the hunting and trapping regulation book each year and are available online. This summary of waterfowl regulations has detailed information on bag limits, locations, dates, and times as well as some species identification illustrations. The most complete resource for waterfowl information including waterfowl identification is located on the U.S. Fish and Wildlife Service website at www.fsw.gov.

Bob Hines from the U.S. Fish and Wildlife Service produced a waterfowl identification book call “Ducks at a Distance”. This books illustrations are used by hunters and birdwatchers across North America for identifying ducks and geese either in hand or in flight. Many states publish many of these illustrations in their regulations books to assist in proper identification.

The Ducks at a Distance booklet can be downloaded for future reference from the U.S. Fish and Wildlife Service website.

The Mallard is the most common duck in Minnesota and hunters typically take 270,000 Mallards each year in Minnesota. Mallards, Wood Ducks and Teal make up are the top three ducks species harvested in Minnesota each year. One out of every three ducks harvested in North America is a Mallard. The illustrations below are taken from ‘Ducks at a Distance’ booklet complied by Bob Hines.

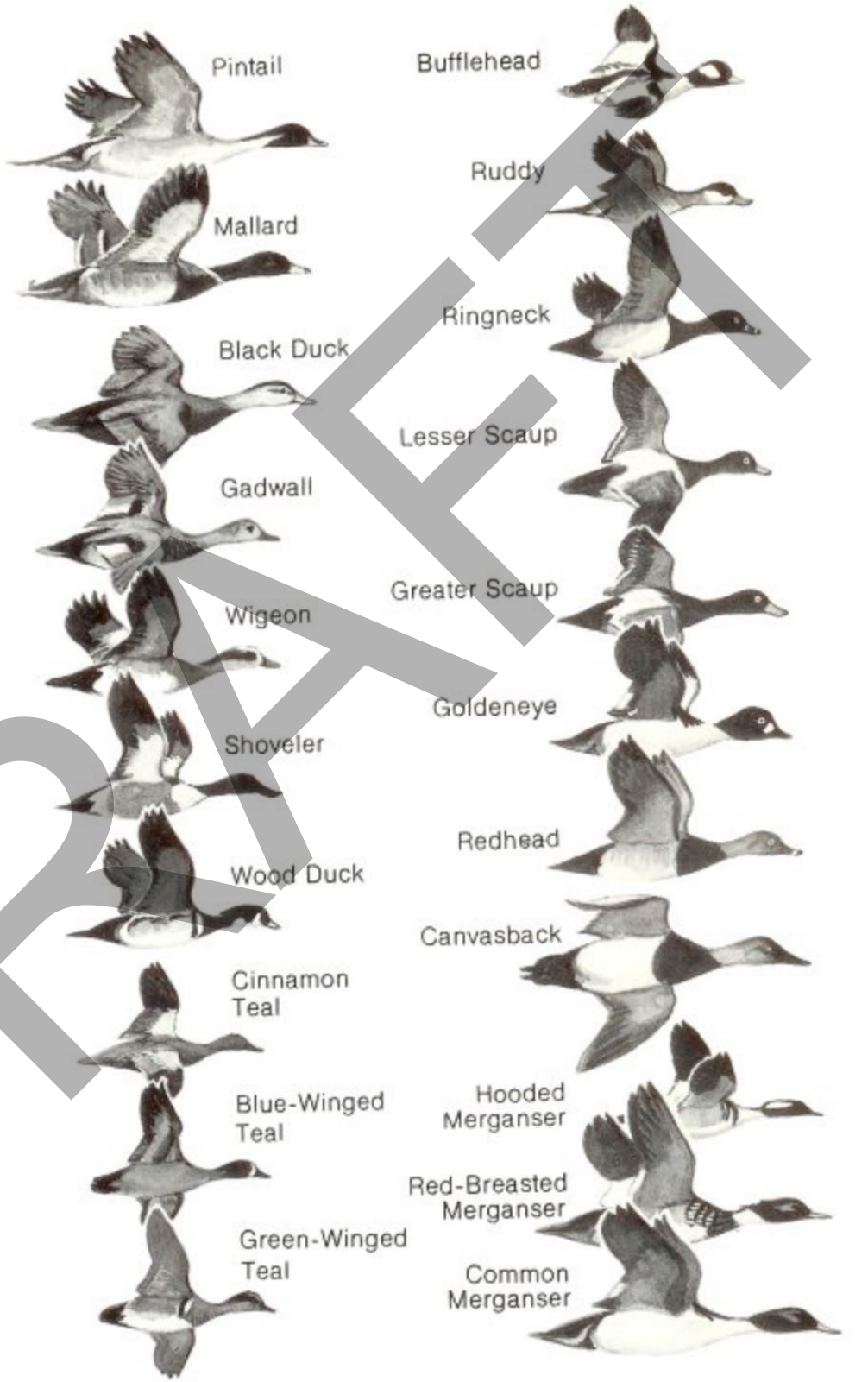
Using waterfowl wings is a great way to help identify waterfowl species and gender.



Comparative Size Chart for Migratory Waterfowl

Two size charts have also been included from 'Ducks at a Distance' which show the difference in size and species of most ducks and geese when compared with each other.

Most Conservation Officers have responded to calls of hunters shooting misidentified ducks or geese. When in comparison on the size chart, Swans and Snow Geese should not be misidentified due to the drastic size difference.



Trumpeter Swan

Can be found in many portions of the state mixed with all types of waterfowl.

- Wing span of 5-7 feet.
- Weighs 15-30 lbs.

Canadian Goose

Found in most parts of the state.

- Weighs 7-20 lbs.

Snow Goose

Can be found in many portions of the state but mainly found in the western half. Typically smaller than a Canadian Goose and substantially smaller than Swans.

- Weighs 4- 6 lbs.

Bow Hunting

Bow hunting is one of the oldest methods for taking game known to humans. Archery-related activities around the country have seen a large increase in participation over the past few decades. Several reasons associated with this increase in popularity is required self-discipline needed to hone archery skills and a connection with the outdoors which is unlike other taking methods.

To become a proficient archer, an individual must be knowledgeable of their equipment, limitations, game which is being perused, and lots of practice. A successful archer must understand distances to targets, proper shot placement for lethal kills and be able to make these shots routinely during high stress moments under all sorts of weather conditions. Routinely practicing is the only way an archer can insure they will harvest animals in an ethical way.

People bow hunt for various reasons. It gives them a sense of history. After all, it is one of the oldest hunting methods. It also can be a personal challenge to master the skills of a good bow hunter.

What Do You Need To Bow hunt?

A good pro shop that specializes in bow hunting will set you up with equipment that is right for you. You must feel comfortable with your bow, how it feels in your hand and how it draws. Remember, no matter how good your equipment, it's only as good as you are, so practice, practice, practice.

Equipment needed

- A good bow
- Arrows and razor sharp broadheads
- Finger protection and/or release equipment
- A covered quiver to keep broadheads from cutting the hunter

Equipment must be matched to the needs of the hunter. A bow should match the drawing ability of the hunter as well as the game being hunted.

You should have an experienced bow hunting specialist help you pick the bow that best meets your skill and strength.

Judging distance

To become a good archer you must practice and develop the skill of judging distance. In order to place an arrow within the kill zone of Minnesota's big game animals, you must judge the distance accurately.

The easiest way to judge distance is to carry a range finder with you while bow hunting. Otherwise it requires a lot of time and practice. You can develop your range finding skills by either joining a 3D archery club or working with a friend who will place 3D targets for you and let you practice judging their distance. Knowing your hunting area and the distance of different landmarks from your stand also helps.

Four main types of bows:

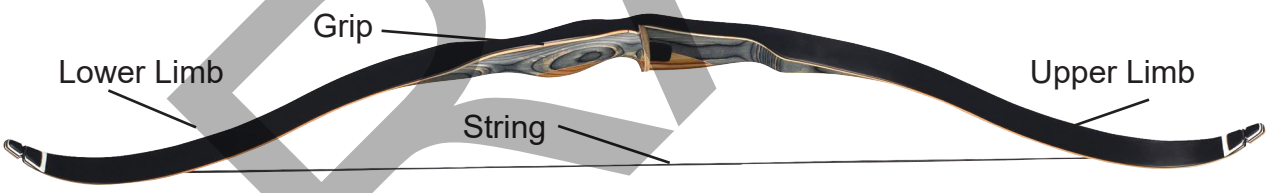
In modern times, the recurve and compound bows dominate for sport and hunting preferences. Newer materials, including flexible plastics, fiberglass, and carbon fibers, have led to an increase in range and projectile velocity.

Long Bow

Sometimes called a “Stick Bow” -- the traditional bow. Usually straight until the string is attached. The bow curve and power is dependent on how far the string is pulled.

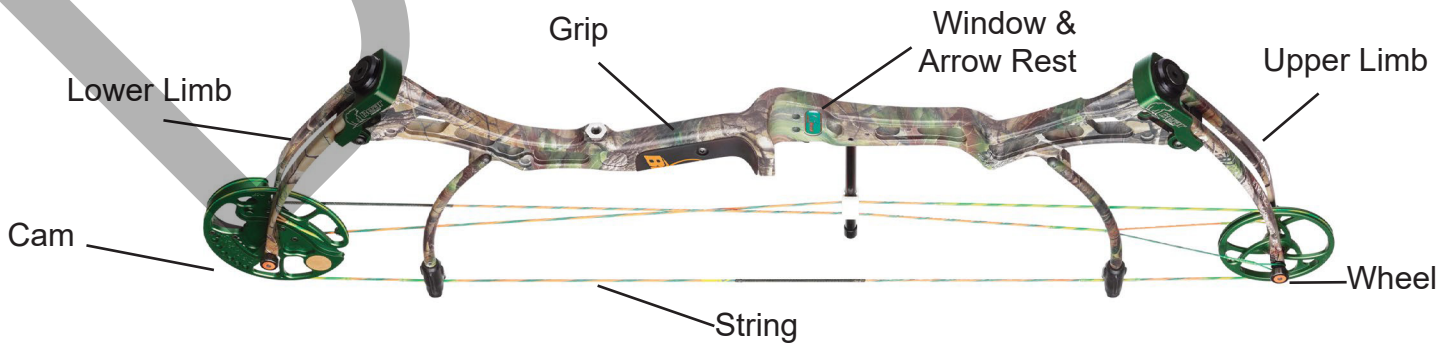
Recurve

A stick bow that curves at the ends. Smooth and quiet when shooting, a recurve has more power and is shorter than a long bow.



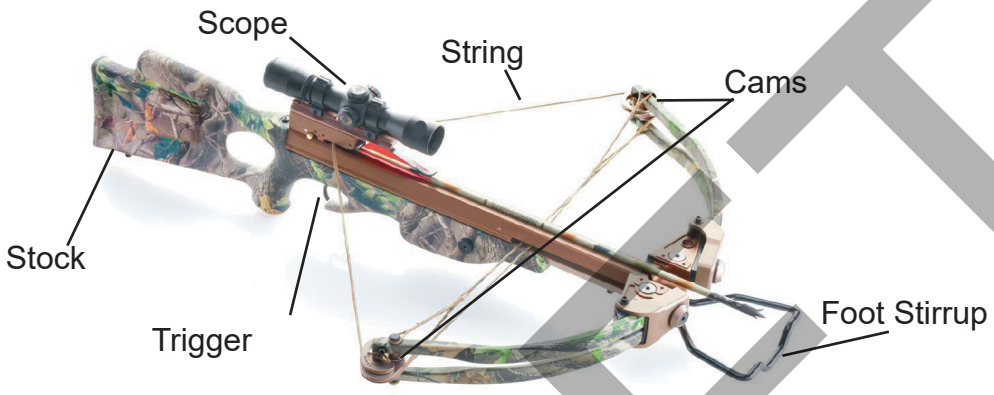
Compound

Most popular bow for hunting. Uses cables and pulleys to provide more power with less effort than pulling a long bow.



Crossbow

A crossbow is a bow that is attached to a stock, similar to a rifle, that lets the bow be fired from the shoulder. Hunters who use crossbows need to exercise the same restraint that hunters do using stick bows. In other words, shooting distance is more than compound bows.

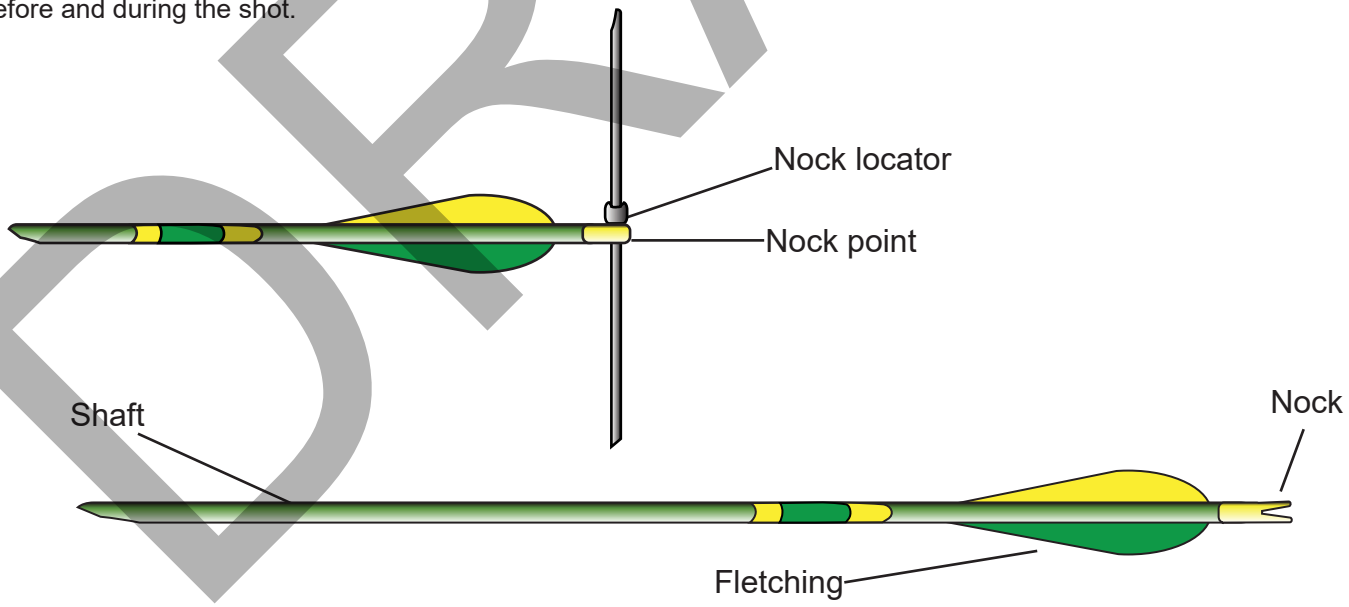


Arrows

Arrows and crossbow bolts are typically made up of four main components. The parts of an arrow or bolt are a tip, shaft, fletching and nock.

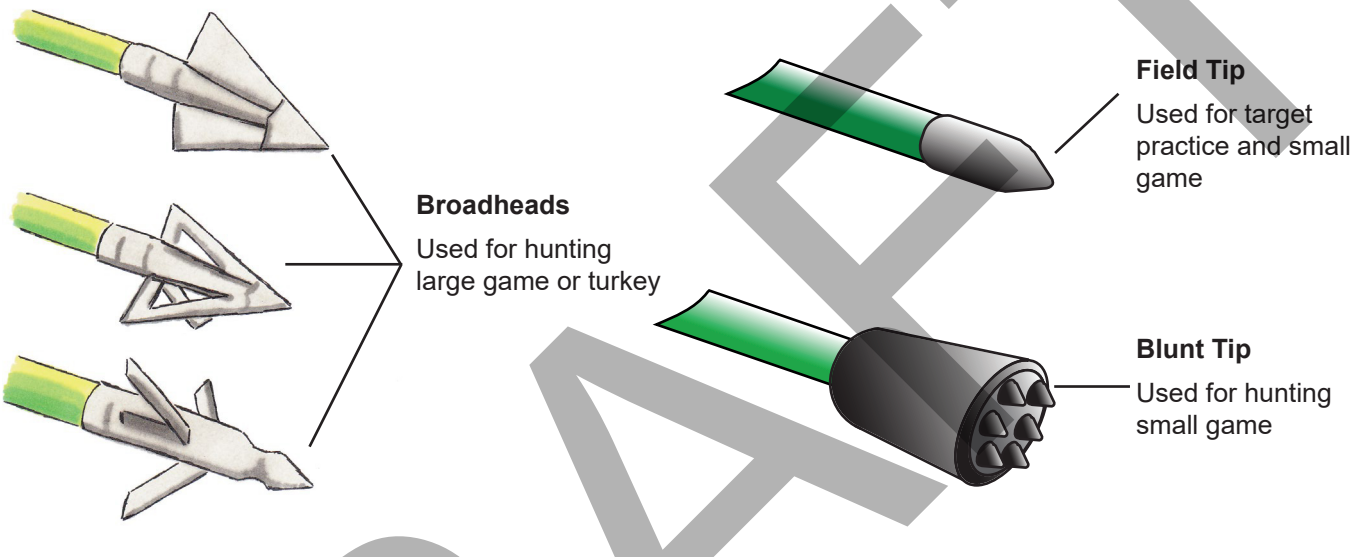
Arrows are sized specifically to the bow and draw length of the archer.

Arrow shafts are made of wood, various types of metals, composite materials (Carbon) or a combination of these types of materials. Fletchings are used to help control arrow flight. Nocks are used to hold the arrow onto the bow string before and during the shot.



Arrow and Bolt points are also made of different types of materials including metals, glass and stone. Tips are usually produced by manufacturers for specific types of animals along with specific hunting and practicing situations. Most arrow tips fall into these four categories which consist of big game hunting, small game hunting, bow fishing and target practice.

Practice tips and hunting tips do not fly the same or have the same point of impact. For ethical shots and humane taking of animals, archers must practice with hunting points when switching from practice points. Most archers will need to make some small changes to the bow sights or aiming location to correct the difference in arrow flight patterns when changing points.



Broadheads

Used for hunting large game or turkey

Field Tip

Used for target practice and small game

Blunt Tip

Used for hunting small game

Courtesy of Kelly Farnar

Archery hunting like other complex sports sometimes requires obtaining knowledge from experts on techniques and equipment. Archery shops, sporting goods stores, sportswoman and sportsmen clubs are a good place to obtain additional knowledge. Also, there are archery education courses are offered through various groups and the Minnesota Department of Natural Resources.

Youth ages 12 and older are eligible to obtain a bow hunter certificate; however, youth ages 12 – 15 are required to first complete and pass a Firearms Safety Course to hunt big game with a bow or firearm. Youth can obtain their bowhunter certification by completing the online bowhunter course at mndnr.gov/safety/bowhunter/index.html

Any person who wishes to bow hunt in the following states is required to have a Bow Hunter Education Certificate: Alaska, Connecticut, Idaho, Maine, Montana, Nebraska, New Hampshire, New Jersey, New York, Rhode Island, South Dakota and Vermont. Canadian Provinces include New Brunswick, Nova Scotia and Quebec.

If you are planning an out-state hunt, please check that state's requirements well in advance of your trip.

ADVANCED HUNTER EDUCATION PROGRAM

MINNESOTA DEPARTMENT OF NATURAL RESOURCES

021622 Bowhunter NBEF
Jane Hunter
123 Mains St
Anytown MN, 55698

MN DNR Division of Enforcement, Safety Training Section
15011 Hwy. 115 Little Falls MN 56345
www.mndnr.gov 1-800-366-8917

Muzzleloader

Objective 5

Muzzleloader hunting, like archery hunting, can offer the sportsperson different opportunities to take game with a very traditional type of firearm or a more modern in-line muzzleloading firearm. Muzzleloaders were originally developed in the 14th century. Over the years they became more refined but they were finally replaced by the modern firearm.

Muzzleloader hunters typically fall into two categories which resemble the type of muzzleloader they use or associate with. The two categories are “Traditional” and “Modern” muzzleloaders. A traditional muzzleloader typically does not incorporate new modern technology in the function of the firearm. Most are historically correct for the time period they represent. Modern Muzzleloaders are constantly evolving and use improved technology including sights, modern bullets and improved ignition systems.

Muzzleloaders have some differences from modern firearms. Their range is less than a modern rifle, so making a clean shot with a muzzleloader is a challenge to the hunter. He or she must get close enough to hit a vital area. People like the challenge of hunting with a muzzleloader as well as the sense of heritage that comes with using such a specialized, historical firearm. However, special precautions must be taken with both the firearm and the powder to ensure that the muzzleloader is safe to fire and to store.

Muzzleloaders are loaded from the muzzle of the barrel. Black powder, a black powder substitute or powder substitute pellets are measured and either poured down or put down the barrel. The bullet and patch or just bullet is then pushed down the barrel with a ramrod until the powder is slightly compressed by the bullet. When the user decides to shoot, the charge is ignited by a spark when the trigger is pulled and strikes or ignites the charge though one of many ignition types.

Modern powder found in pistol, shotgun and rifle cartridges is not safe for most muzzleloaders. Using the wrong powder in a muzzleloader can result in failure of the muzzleloader and or injury. Manufactures and gunsmiths will make recommendations for the amount and type of powder to be used for the specific muzzleloader.

Black Powder

Most muzzleloaders use black powder or a black powder substitute. Both can be ignited from sparks, heat, impact, static electricity and even sunlight. When ignited, they burn hot and fast. They may not ignite when damp or wet. All gun powders need to be stored and handled safely. Store in correctly labeled original manufacturer’s containers to prevent accidental ignition.

Loading a Muzzleloader

Loading a muzzleloader should be done with great care. Black powder is an explosive. Always follow your owner's manual for the correct loading procedure.

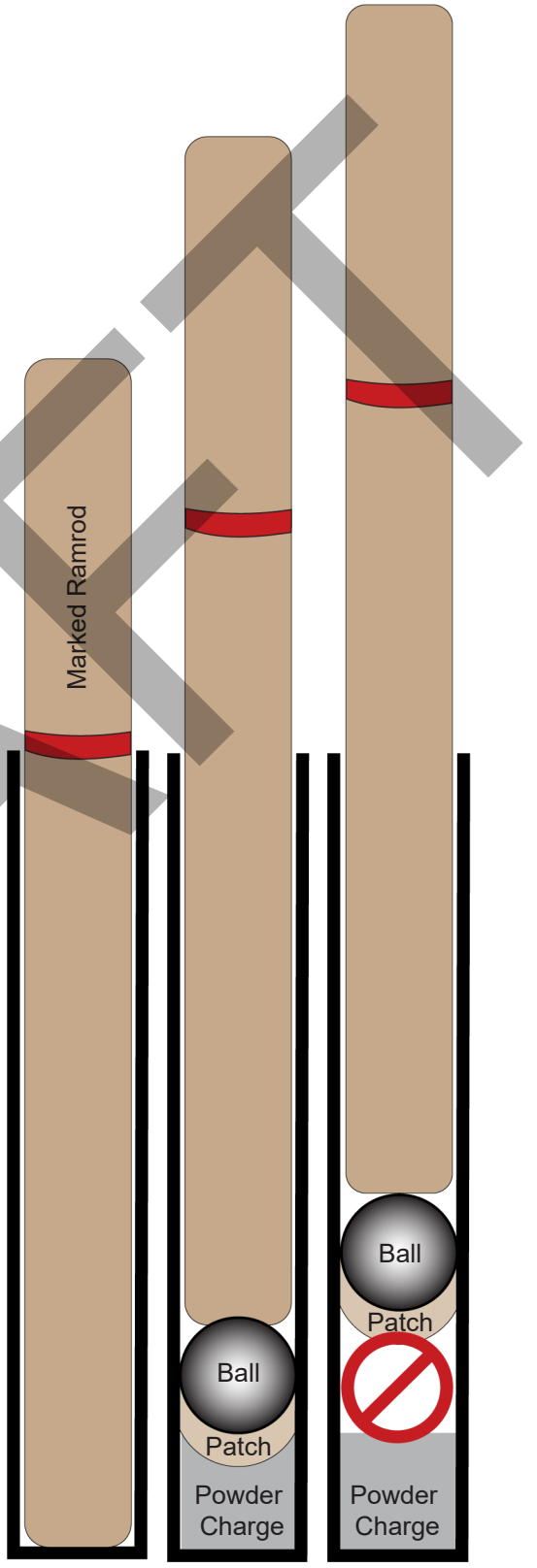
The ramrod is used to push bullets down the barrel and pack the powder charge. Packing the bullet onto the powder eliminates open spaces in the powder and between powder and the bullet. Space between the bullet and powder or loose powder behind the bullet can damage the firearm or injure the shooter.

Ramrods are also used to verify if the muzzleloader is loaded or not. With an unloaded muzzleloader place the ramrod in the barrel and mark the ramrod with a notch or marker at the end of the barrel. Your ramrod can now be used to indicate if the muzzleloader is loaded or not.

Most muzzleloaders can be unloaded without firing by using a CO_2 charge which blows the bullet and powder back out of the barrel.

Bullets or balls come in a variety of types, weights and styles.

Muzzleloading, like archery, is a challenging sport which requires a large amount of knowledge and practice to master the art. Knowledge can be gained from books, experienced hunters, sporting clubs and advanced hunter education programs.



Make sure there is no space between the patch and powder charge when loaded

- Follow manufacturer's procedures and get help from a qualified instructor.
- Loading a muzzleloader should be done with great care. Always follow your owner's manual for the correct loading.
- Use a marked ramrod to find out if a muzzleloader is unloaded.
- Always consult a gunsmith before using any historic firearm.
- Do not expose gun powder to an open flame or store it anywhere there is a possibility of a spark.
- The two types of powder most commonly used in muzzleloaders are black powder and black powder substitute.

Handgun

What is a handgun?

A handgun is a firearm that is designed to be fired by just the hands at close ranges. Pistols have short rifled barrels and fire single projectiles. Pistols are compact and are typically carried in a holster on a belt.

Similarities of Rifles and Handguns

- Rifles and handguns are distinguished by spiral grooves in the bore known as “rifling”.
- They fire cartridges typically with a single projectile called a bullet.
- Are aimed by aligning the sights and are fired by carefully squeezing the trigger to avoid disturbing the sight picture.
- Are typically used for stationary targets.

Parts of a handgun

There are three main types of handguns:

Pistols also typically have the same types of actions as rifles and shotguns with some slight variations. Most pistols fall in one of the following categories: revolvers - including both single and double actions, break, and semi-automatic.

Revolver:

Revolvers have two main types - single action and double action. In a single action, the hammer must be cocked back in order to fire the cartridge with the pull of the trigger. In a double action, the hammer automatically cocks with each pull on the trigger. The cylinder holds each cartridge and aligns it with the barrel for each shot. Each time a cartridges is fired, the cylinder rotates.

Single Action Revolver Double Action Revolver

Break Action Pistol

Beak action pistols are loaded by hand similar to a break action rifle. The cartridge is ejected when the action is opened.

Semi-Automatic Pistol

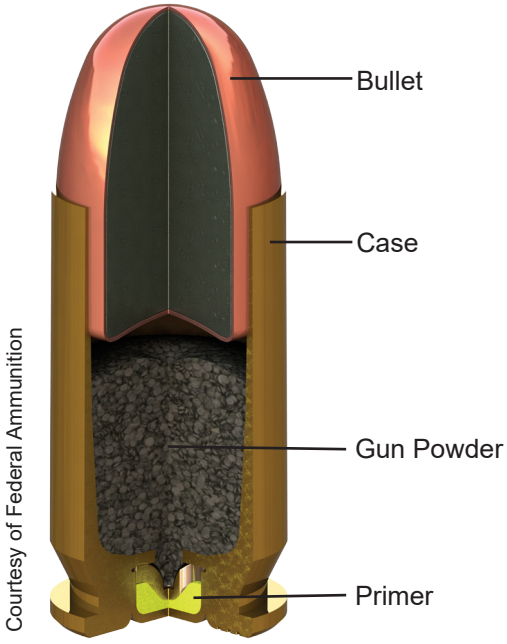
Semi-Automatic pistols operate the same as semi-automatic rifles and shotguns. The cartridge is loaded in the magazine, located in the grip of the pistol. The action ejects the round and loads the next.

Pistols are also used in Minnesota for hunting large and small game. Hunting big and small game with a pistol requires getting close to game to effectively place a lethal shot. Some hunters rely on open sights for hunting while some use scopes which increases the shooters ability to shoot further.

Ammunition manufacturers have recommendations for bullet caliber, bullet type and minimum energy requirements for taking big and small game.

In Minnesota you can only take big game with a bullet at least .220 caliber or larger and it has to be a centerfire ignition. This definition allows many types of pistol cartridges to be used because they meet the minimum requirements. Keep in mind many would not be recommended to take big game because they would not be capable of humanly taking of big game.

Pistol hunters must chose the appropriate ammunition for the game they are hunting. Hunting with a pistol also requires a lot of practice at the shooting range so the hunter can take game in an ethical and humane way.



Courtesy of Federal Ammunition

Glossary

Minnesota Hunter Education Program

Action – The part of the firearm that loads and fires the ammunition as well as ejects the spent case.

Ammunition – The cartridge, powder, shot or shot shell used in a firearm.

Barrel – The part of the firearm through which a projectile or shot charge travels under pressure from burning gunpowder, compressed air or other like means.

Blaze Orange/Pink – Orange or Pink that is florescent which, when worn, is visible to other hunters.

Blind – A temporary structure such as a tent, used to conceal the hunter while waiting for game to come into range.

Bolt Action – The bolt handle on a firearm that loads and unloads ammunition by pivoting the handle upwards and pulling it backwards.

Carrying Capacity – The number of animals the land can provide food for during winter or drought.

Case – The container holding the primer, powder and shot or bullet.

Choke – The narrowing at the end of a shotgun barrel that determines the pattern of the pellets as they leave the gun.

Fair Chase – The ethical and lawful pursuit and taking of any free-ranging wild, native North American big game animal in a manner that does not give the hunter an unfair advantage.

Habitat – The natural environment of any animals or plants that includes a variety of food, water, cover and space.

Harvest – The taking of game through any legal method of hunting.

Haul Line – A rope or strong cord that can be used to raise or lower a firearm safely into or out of a tree stand or blind.

Hypothermia – Your body gets chilled due to being out in the cold for too long, causing your body's internal temperature to drop. Uncontrolled shivering is one of the first signs of hypothermia.

Marksmanship – The hunters' or shooters' ability to apply the fundamentals of shooting to accurately hit their intended target(s).

Muzzle – The end of the barrel where the bullet comes out.

Muzzle Control – The act of keeping a firearm pointed in a safe direction.

Non-Toxic Shot – Any shot approved by the U.S. Fish and Wildlife Service for hunting waterfowl or in designated waterfowl areas.

Prone – Lying horizontal, or flat, on the ground.

Range – How far shot or bullets travel after exiting the barrel of the firearm.

Ricochet – The deflection of a bullet when striking water, flat surfaces, or hard objects such as rocks or metal.

Rifle – A firearms whose barrel has small spiraling grooves causing the bullet to spin and fly straighter.

Rifling – Grooves inside a rifle barrel that cause the bullet to spin.

Safety – A mechanical device that is designed to block the trigger to prevent the firearms from firing.

Shotgun – A firearm that fires multiple pellets.

Stock – the platform for supporting the action and barrel of the gun and is the part of the firearm held by the shooter.

Tether – To tie or secure, by using a rope or strap.

Zone of fire – An area in front of the hunter that the hunter can safely shoot.

Required youth Hunting licenses, stamps and FAS certificate by age					
AGE	**11 & under**	**12**	**13**	**14 & 15**	**16 &17**
Firearms Safety (FAS) Certificate	Not required	Need for Big Game and Wild turkey	Required	Required	Required
Small Game License	Not required	Not required	Not required**	Not required	Reduced price Youth License
Wild Turkey License	Reduced price Youth license	Reduced price Youth license	Reduced price Youth license	Reduced price Youth license	Reduced price Youth license
Trapping License	Not required	Not required	Reduced price Youth license	Reduced price Youth license	Reduced price Youth license and trapper edu.
Stamps					
Pheasant Stamp	Not required	Not required	Not required	Not required	Not required
Duck Stamp	Not required	Not required	Not required	Not required	Federal stamp Required
Waterfowl					
Special Canada Goose Permit	Not required	Not required	Not required	Not required	Not required
Big Game					
Big Game: Firearms	Age 10 & 11* need a free license	Need a free license*	Reduced price Youth license**	Reduced price Youth license	Reduced price Youth license
Big Game: Archery	Cannot Hunt	Need a free license*	Reduced price Youth license	Reduced price Youth license	Reduced price Youth license

* Must be within immediate reach of parent/guardian with firearms deer license (if assisting youth)

**Must be accompanied by parent/guardian

Apprentice Validation - 2 year license cycle, accompanied by an adult licensed hunter

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DEPARTMENT OF NATURAL RESOURCES