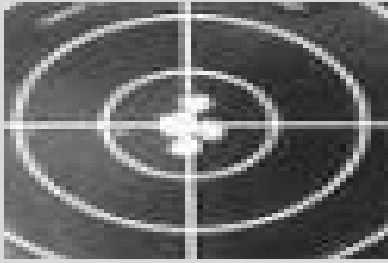# MODERN RIFLES &
SHOOTING TECHNIQUES

Objectives

- Identify the major parts of a rifle

- Identify the five different rifle action types

- Learn the difference between center and rimfire cartridges

- Learn the make up of a cartridge

- Learn different shooting positions

The use of rifles when hunting in New Jersey, is very limited. Trappers may use .22's when working their lines to dispatch animals they have caught. Woodchuck hunters are allowed to use rifles, but only on private property. There is now a winter rifle season for coyote. Consult the current Fish and Wildlife Digest for current rules and regulations on hunting with rifles.

Why then is it important to learn about rifles? There are many reasons, most importantly you will become familiar with all types of firearms and how to use them. Some students, completing their Hunter Education in New Jersey, will go on to hunt out of state or out of the country, where the use of a rifle is commonplace.

The rifle's excellent accuracy makes it an extremely effective hunting tool. However, with the ability for bullets to carry over a mile, it is important that you use great caution when firing a rifle. Always be sure of your target and beyond. When hunting with a rifle in NJ, you must possess a firearm license and a rifle permit. The gun can only hold three rounds (1 in the chamber and 2 in the magazine) regardless of the magazine's capacity.

Major Parts and Action Types

Pictured above is a **bolt-action** rifle. The action is worked manually, by lifting up on the bolt handle and pulling it back. This will open the action or eject a round. To close the action, it is pushed forward then down.

BREAK ACTION

Break-action rifles can either be single or double barrels. Typically, double barrel rifles are used for hunting dangerous game (lion, bear, water buffalo etc.) and come in large calibers. Dangerous game hunters choose double guns because they want a quick follow up shot, with no chances of the action jamming while loading another round.

Lever-actions are commonly seen in western movies, being used by cowboys. The lever is worked by moving it down and forward, then back to its original position.

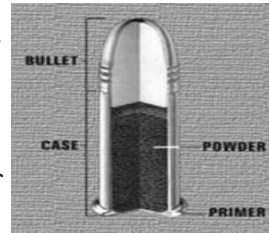**Pump-action** rifles work by sliding the forearm forward to close the action and back to open it.

Semi-automatic rifles will reload a round each time it is fired. The trigger must be pulled each time, to fire the gun. Automatic firearms, which are not legal to use for hunting in NJ, fire multiple shots while the trigger is squeezed.

Center and Rimfire Cartridges

A rifle cartridge can be broken into four parts. They are the bullet, case, powder, and primer.
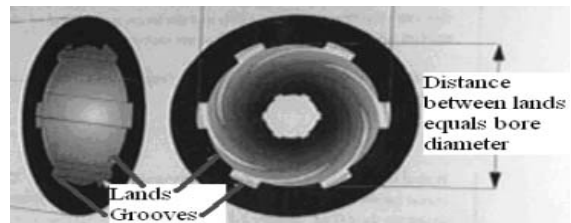

There are two different types of cartridges, they are centerfire and rimfire. Center and rimfire cartridges look similar. The big difference between the two is the location of the primer.

A centerfire cartridge primer is located in the center. A rimfire cartridge primer is located along the entire rim of the cartridge.

Accuracy

Rifles are extremely accurate. There are many factors that come into play when accuracy is concerned. The speed of the bullet, bullet weight, rifle's caliber, but the most important thing is hidden inside the rifle's barrel. The barrel is rifled. A rifled barrel has

lands and grooves that corkscrew when moving up the barrel.

Rifling causes the bullet to spin, just like the spiral put on a football when it is thrown. Without this spin the bullet would tumble end over end through the air.

Sighting in and Shooting Positions

No matter what little gadgets and gizmos a rifle has, the gun is only as accurate as the person shooting it. To become proficient at shooting a rifle, it takes practice and learning the limits of you and your rifle. A shot should only be taken if you are 100% certain you can make it.
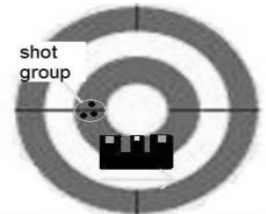
Depending on the game being hunted, the hunter will have to determine what caliber rifle and grain bullet fits the overall, shooting situation. A deer hunter in Maine may prefer a heavy grained bullet in .30-.30, while this would not suit the midwest varmint hunter.

Whether shooting iron sights, a peep sight, or using a scope, the rifle must be sighted in at a certain distance. The range that you choose to sight the rifle in is dependent upon the distance you plan to shoot. If a rifle is zeroed at 100 yards, that means it will hit the center of the target at that distance. What will it do at 50 yards or 125 yards? This can only be determined by shooting at different ranges. A bullet may still be rising at 100 yards, therefore, at 125 it is high and at 50 it is low. Game will not always present itself at a rifles zeroed distance. Practice will ensure that the proper aim is taken at varying ranges.

Iron Sights

When sighting in, make sure of a consistent and solid rest (shooting vises work great when sighting in). Just because a rifle was bore sighted does not mean it is on target. Shoot several shots at the same distance and spot on the target. If the shots are in a

Move rear sight to the right to center shot group.

group, you can adjust the sights. Adjust the rear sight in the direction you want the shot or group to move. This means that if the shots are off to the left of the target, you must move the rear sight to the right.

Peep or Aperture Sights

To use these sights, the shooter looks through the small hole in the rear sight. Then line up the front post, so it is centered in the peep. Follow the same rules as when sighting in iron sights.

Scopes

Scopes have dials for alignment of the shot. One controls horizontal movement and the other vertical. Read the manufacturer's instructions on the distance each click will move your shot at 100 yards. If it is 1/4" at 100 yards, this means it will be 1/8" at 50 yards and 1/2" at 200 yards. This can be confusing, but practice will make perfect.

Shooting Positions

Once the rifle has been sighted in, you will want to practice shooting from different positions. There are four basic stances: standing, kneeling, sitting, and prone. Standing is least steady and prone the most steady. However, when hunting you can take advantage of your surroundings or use shooting sticks to help steady for a shot. Trees, mounds of dirt, and stumps are all excellent for steadying a shot, as are backpacks.

If nothing is available to get a quick rest, the sling on the gun can be used to help steady a shot. This is done, by taking your non-shooting arm and putting it through the sling, so that it rests just behind the elbow. Now, wrap the sling around your forearm, only having your hand pass through a second time. Rest the forearm on your hand, flex your bicep to tighten up the sling, making a tight and stable shooting position.

When preparing to take a shot, control your breathing (if you have been hiking take a couple seconds to catch your breathe and relax). It is necessary to hold your breathe on the shot. Take a deep breathe and exhale a bit of air then hold for the shot. While focussing on the front sight squeeze the trigger slow and steady, it should almost be a surprise when the rifle fires (slapping the trigger like a shotgun will throw the shot off). After the shot is fired continue to squeeze the trigger and keep your eyes on the target you intend to hit. This is known as follow through. These techniques can also be used when shooting a slug gun or muzzleloader.

When using a scope, many shooters will tend to just get the target in the scope picture and not concentrate on the exact spot they want to hit. Put the crosshairs on an exact spot, pick out a hair, muscle feature, or dot on the target and keep your eyes on that spot even after the shot. A great saying is, "aim small, miss small." This means if you miss the spot you were aiming at, it misses by a fraction of an inch.

Remember, when in the field or at the range always wear eye and ear protection. Hearing protection can be purchased that allows you to hear soft noises, but will block loud ones (like a gun being fired). Remember, hearing and vision loss is usually permanent, never use your firearm without eye and ear protection.