

FIREARMS SAFETY

CLAIBORNE COUNTY
8TH GRADE

OBJECTIVE:

Students will learn the 10 Commandments of Firearm Safety.

Students will learn the basics parts of a firearm and how they work.

Students will learn the basic parts of a cartridge and how it works..

Students will learn how fast bullets travel for a better understanding of a firearm's energy potential.

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Firearms provide us with:

- a fun chance for recreation through many types of target shooting
- a means to effectively hunt animals for food
- a means of personal defense



So, what is the number one thing we need to remember before handling any type of firearm?

SAFETY

When the first line comes up, ask the class to tell you what firearms provide us with. Some will not be serious but try to steer the discussion toward positive answers.

Point out that here are many who want to see all civilian gun ownership abolished. Knowing and practicing safe gun handling reduces unintentional firearm injuries and thus gives the anti-gun crowd less 'ammo' for their cause.

SAFETY is our number one concern!

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There are three things everyone needs to understand before handling any type of firearm:

- Understand the....**SAFETY RULES**
- Understand your...**FIREARM**
- Understand your...**AMMUNITION**

Remember that firearms have great destructive power.

Once that bullet starts down the barrel, no force on Earth can call it back!



This slide introduces the three main things we are going to be talking about in this lesson. As the three points comes up, each is followed by a humorous picture.

When the first line appears, ask the class what they think the three things everyone needs to know before handling a firearm might be. Again, steer the discussion towards serious answers.

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ALL GUNS ARE ALWAYS LOADED

Do not just pretend this is true, this must be your mindset 100% of the time. If everyone believed this all the time, there would be no more unintentional firearms injuries.



Always keep the muzzle pointed in a safe direction
Never let the end of the barrel point towards anyone.
Always know where your firearm is pointed.



Keep firearms unloaded and actions open until you are ready to shoot or start hunting.
Not only does this keep you safe, it lets the people with know that your firearm is safe. If the action is open, there is no more the weapon can fire.

This slides begins the first three of the Ten Commandments of Firearm Safety.

Ask a member of the club to read each one and then ask the class to offer any opinions or ask any questions on each.

In some 4-H clubs you will many students who use firearms and in some clubs you will have very few. So if you are not a shooter, you may want to do some background research before teaching this lesson.

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Types of 'actions' common in longguns. The action is where the firing pin and safety are located and where the cartridge is actually fired.

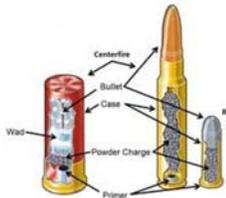


This slide illustrates the different types of actions normally seen in long guns. The action actually contains the fire control mechanism and controls the cartridge while it is being fired. When we say 'keep the action open' this is the part of the firearm we are talking about.

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Understanding your ammunition:

Ammunition also has similar components but one difference. In the diagram, the rifle and shotgun cartridges have separate primers while the rimfire cartridge has an internal primer.



How does a cartridge work?

1. The gun's firing pin will hit the cartridge's primer when the trigger is pulled.
2. The material in the primer will ignite after being hit by the firing pin.
3. The ignition of the primer will ignite the powder in the cartridge.
4. As the powder burns, it gives off gases that expand rapidly.
5. It is these rapidly expanding gases which push the bullet or shot charge down the barrel and toward the target.

This slides goes over the parts of a cartridge as well as what happens inside a cartridge when it is fired. Note that the rifle and shotgun cartridges are centerfire, that is the firing pin must hit the little circular primer in the cartridge's base in order to fire. The small cartridge is a rimfire. That means that the priming material is spun into the outer rim of the cartridge's base and this outer rim must be struck by the firing pin.

Stress that primers are pressure sensitive! Hit it with something and it can go 'Bang!'

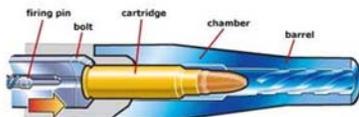
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Putting it all together:

In the diagram we see a cartridge entering the chamber of a barrel. The chamber and bolt of a firearm must be very strong to contain the pressure generated when the cartridge is fired.

Think of it like this: the tires on a car are inflated to about 35 psi (pounds per square inch). If a rifle cartridge produces 56,000 psi, then the expanding gases in that cartridge have 1600 times more pressure than a car tire.

Remember that the firearm's barrel gives direction and accuracy to the bullet.



Now we talk about the pressure that occurs when a cartridge is fired in a firearm. Stress that due to this pressure, firearms must be in perfect working order in order to be safely fired.

Also point our that anything that causes this pressure to increase above normal can cause catastrophic failure of the firearm. Things like a barrel obstruction, the wrong ammunition, or carelessly reloaded ammunition can turn your firearm into an explosive device.

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How fast do bullets travel?

An exercise in math!

Bullet speed is measured in feet per second (fps). Now this is a little hard for most folks to imagine but we can imagine miles per hour (mph) because that how the speed of our cars is measured.

So, lets convert fps to mph just to get a better grip on how fast a bullet actually travels.

The most common handgun cartridge in the world is the 9mm. It has been used by militaries, police agencies and civilians around the world since 1908. It is currently serving the United States military as our service cartridge.

Lets see how fast it goes.



The next few slides talks about bullet speed. Your students will have a better understanding of the destructive power of a firearm if they can better relate to how fast a bullet travels.

What we are actually going to do is convert bullet speed, which is normally expressed in feet per seconds (fps), into miles per hour (mph), which we can all better understand.

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A 9mm bullet travels at about 1,000 fps or 60,000 feet per minute (fpm).

To get miles per minute (mpm), we take 60,000 fpm / 5,280 feet in a mile.

So... 60,000/5280 = 11.4 miles per minute (mpm).

To get to mph from mpm..... 11.4 mpm X 60 minutes per hour = 681 mph.

This means a bullet fired from the standard US Military M9 handgun is traveling 3 1/2 times faster than a top NASCAR at Bristol!



Now we are going to walk your students through the math of converting the speed in feet per seconds (fps) of a 9mm handgun cartridge into miles per hour.

Instead of just popping up the answers, have your students try to do the math themselves. I know this is hard when you're dealing with 8th graders but give it a try.

Each line pops up with a blank. Try to get your students to fill in the blank. The next click will fill in the blank.

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Now lets talk about the most famous hunting round to originate in the US; the 30.06. First adopted by the US military 1906, the 30.06 has become one the most used and most effective hunting cartridges in the world.



An average 30.06 fire a bullet at about 3,000 fps or 180,000 feet per min. (fpm)

To get miles per minute (mpm) we... 180,000/ 5,280 feet in a mile = 34.1 mpm.

34.1 mpm X 60 minutes per hour = 2,045 mph.

This means that the 30.06 bullet is traveling 10 1/2 times faster than the speed of a Sprint Cup champion!



In this example, we do the same thing as on the previous slide except with a very common rifle cartridge. The 30.06 (say, *thirty ought six*), is a classic and very common deer and elk hunting cartridge.

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In conclusion:

A firearm is machine that requires an external force to activate it. This means that no firearm made will fire on its own.

Someone has to cause it to fire.

All of us have the responsibility to handle firearms in a safe and intelligent manner.



This slide is just a recap of what we have talked about. Please stress each point on this slide.

Point out that we must all be responsible around firearms because the alternative can be serious injury or death!

There are a number of photos that come up at the end.

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Proper firearms training.....



.... can save your life.

Just for fun!

Go over the rules for the Demonstration contest that we have in February. These are the last four slides in the presentation.