



Under the guidance of a certified instructor, youth will learn the responsible handling of firearms, and more specifically handling air rifles and .22 small bore rifles. Youth will gain knowledge and build life skills such as responsibility, decision making, discipline, goal setting, teamwork and safety. Ages 8-18.



## Exploring 4-H Shooting Sports Rifle

### Spark Activity: Straight Shooter

Ever wonder how a rifle shoots a single bullet so accurately? By definition, a rifle is a long barreled firearm that has spiraled grooves cut inside the barrel that contact the aerodynamically shaped, elongated bullet (think football shape) making it start spinning as it leaves the barrel when shot. This spinning motion stabilizes the bullet keeping it from “tumbling” and floating around.

Let’s try a simple experiment to show how motion affects the movement and stability of a bullet.

1. Take a football and practice throwing it with different spinning speeds. Try to throw it without spinning, spinning slow, then spinning it as fast as you can. What do you notice about it flying straight or off-course?
2. Take a baseball and try to throw a “knuckle ball”. This is where you “push” the baseball out of your knuckles during your throwing motion instead of spinning it off your fingertips like you do a normal “fast ball”. A good knuckle ball pitcher strikes out a lot of batters because a projectile not spinning “tumbles and floats” around erratically making it hard to follow!



## 4-H Project Levels and Goals

### Beginner

- Learn first shot fundamentals
- Learn range commands
- Know how to keep the muzzle pointed in a safe direction with your finger off the trigger until ready to shoot
- Practice dry firing

### Intermediate

- Demonstrate different shooting positions including prone, kneeling, and standing
- Demonstrate live firing
- Know how to select proper ammunition
- Know safe storage and transport of air rifles or small bore rifles

### Advanced

- Know proper range setup and target scoring
- Improve stance, grip, trigger control, and breathing techniques
- Explain sight picture and sight alignment to others
- Identify errors in form and position and coach improvements

## Put Your Project Into Action

### Show Your Skills

- Make a poster of the parts of a rifle
- Make a poster or scrapbook of pictures of your shooting sports events related to rifle
- Interview a family member or a skilled person about their experiences with a rifle

### Service and Leadership

- Volunteer to serve with local wildlife, sportsman's or firearm safety organizations
- Participate in fundraising activities to help promote conservation and wildlife
- Give a talk or demonstration on a shooting sports project
- Serve as a role model to younger members about the importance of safety around firearms when participating in instructional classes and shoots (Note: only certified instructors are allowed to teach lessons)

### Technology Connection

- Research different scopes, range finders and video that can all be incorporated into riflery
- Visit a range with electronic scoring systems
- Connecting with a mentor

### Connecting with a Mentor

- Local law enforcement
- Hunters and hunter safety instructors
- Inquire at any local range to shadow a range safety officer

### Events

- Illinois 4-H State rifle shoot
- National 4-H competitions



### Careers for People Interested in Riflery

Law Enforcement  
Armed Forces/Military  
Conservation Officer

Forest Rangers  
Security Guard  
Forensic Science

## Start a Conversation

What if a shotgun barrel had rifling? Would it still be a shotgun?  
What would happen to a bullet fired off the back of a train if the bullet left the barrel at 1,000 mph and the train was traveling forward at 1,000 mph at the same time?

## Want to learn more?

[go.illinois.edu/4Hriflery](https://go.illinois.edu/4Hriflery)

## Explore more at Illinois 4-H!

[4-H.extension.illinois.edu](https://4-H.extension.illinois.edu)



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**Credits:** University of Illinois Extension staff and volunteers that contributed to this resource include Curt Sinclair and Kurt Willoughby, Illinois 4-H Shooting Sports State Instructor | 4-H Spark Sheets are a collaborative effort of 4-H staff, volunteers, alumni and teens from across Illinois. A big thanks to the many contributors and reviewers!