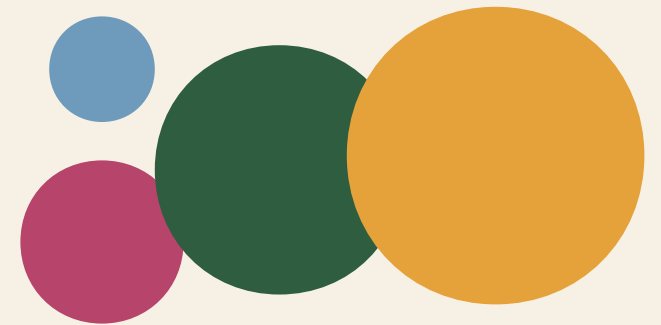


Ham Radio *for 4-H.*

Talk around the world, help in emergencies, and build real skills —
no smartphone required.



Amateur radio (*“ham radio”*) is a hobby where licensed people use radio waves to talk to each other — near or far.

No Internet Needed

Radios work when cell towers and Wi-Fi are down. Perfect for emergencies and outdoor adventures.

Real Science

You learn electronics, radio waves, antennas, and how signals bounce around the Earth and off satellites.

Global Friends

Talk to operators in your town or on the other side of the planet. Some even talk to astronauts!

Perfect match for Head, Heart, Hands & Health.

HEAD

Learn STEM: electronics, physics, problem-solving

HEART

Help your community in emergencies & public service

HANDS

Build antennas, kits, and real radio stations

HEALTH

Outdoor activities, Field Day, and healthy hobbies

Once you’re licensed, the radio becomes your playground.

- 01

Local & Worldwide Talk

Chat on local repeaters or bounce signals across the ocean on HF bands.
- 02

Talk to Space

Contact the International Space Station or work amateur satellites orbiting Earth.
- 03

Emergency Communications

Join ARES/RACES and help when disasters knock out phone service.
- 04

Contests & Awards

Compete in Field Day, earn certificates for contacting all 50 states or many countries.
- 05

Digital Modes

Send messages, pictures, and even text over radio using computers and software.
- 06

Build & Experiment

Design antennas, kit radios, or invent new ways to communicate.

Anyone can do it — no age limit, no Morse code required.

1 Study

Learn the Technician question pool. Free apps and websites make it fun. Most people study 10–20 hours.

2 Take the Test

35 multiple-choice questions. Pass with 26 correct. Exams are run by volunteer examiners near you.

3 Get On the Air

FCC issues your call sign. Buy a handheld radio and start talking — often the same day!

Start with Technician. Upgrade later if you want.

Technician

Best for beginners

All VHF & UHF bands
Local repeaters, satellites
Limited HF privileges
35-question exam

General

Worldwide talking

Most HF bands open
Talk across oceans
35 more questions
Upgrade anytime

Amateur Extra

Full privileges

Every amateur frequency
Maximum flexibility
50-question exam
Deep technical knowledge

You don't need expensive gear to begin.

START HERE

Handheld Radio (HT)

A dual-band walkie-talkie style radio. Great first radio — \$30–\$80. Perfect for local repeaters.

NEXT STEP

Mobile / Base Radio

More power and better antennas. Mount in a car or set up at home for longer reach.

FUN TO BUILD

Antenna

Even a simple homemade wire dipole or a rubber duck works. Building antennas is a classic 4-H project!

NICE TO HAVE

Optional Extras

Headset, battery pack, laptop for digital modes, and a notebook for logging contacts.

Turn ham radio into a real 4-H project.

1 Earn Your License

Study together as a club, take the exam, and celebrate call signs.

2 Build an Antenna

Make a dipole or J-pole from wire and PVC. Measure and test it.

3 Field Day Team

Join the annual emergency-practice event. Set up outdoors and make contacts.

4 Emergency Preparedness

Create a family or club go-kit and practice using it without power.

5 Public Service

Help with parades, races, or community events using radio communications.

6 Science Fair / Demo

Show how radio waves work, contact a satellite, or explain Morse code.

Your next steps are simple.

01

Talk to your 4-H leader

Ask about starting or joining a ham radio project or club.

02

Find a local club

Search ARRL.org or ask at a library. Clubs love helping new young operators.

03

Start studying

Use free resources: HamStudy.org, ARRL Technician manual, or YouTube practice tests.

04

Listen first

You can buy a radio and listen right away — no license needed to receive!

Ready to get on the air?

Questions? Let's talk.

Resources: ARRL.org · HamStudy.org · Your local amateur radio club

4-H · Learn by doing