



Start a 4-H Robotics Club!

Many people want their children to get involved in 4-H Robotics, but they don't know where to begin.

Starting a 4-H Robotics club requires three very important elements: a dedicated Extension agent, an interested volunteer, and, most importantly, young people who are excited about what they can learn through robotics.

These three elements are critical to implementing a county-based 4-H Robotics club.

The 4-H Robotics program in Mississippi starts at the local level and requires community involvement. If you are a parent of an interested child, begin by contacting your local Extension agent. You can find the contact information for your county here: <http://extension.msstate.edu/county-offices>. Extension office staff members can tell you what programs they have available. Don't lose heart if your local office doesn't currently offer 4-H Robotics. Work with your Extension agent to see how you can bring the program to your county.

Once interest is established, the next critical step is finding volunteers who can help 4-H'ers with the robotics project. Do these volunteers have to have engineering degrees or be computer programmers? Absolutely not! Our best volunteers are those adults who are willing to invest their time

and energy into the lives of the youth in their community. Remember: any volunteer who interacts with young people will need to complete a background check. Creating a fun, safe environment is critical for 4-H'ers to reach their full potential. Your Extension agent will help you through the background-check process.

For more volunteer information, check out this quick reference guide: <http://extension.msstate.edu/publications/publications/4-h-volunteer-quick-reference-guide> or these guidelines for supervising young people: <https://extension.msstate.edu/publications/information-sheets/guidelines-for-supervising-youth>.

Next up, determine which age group you would like to work with. In 4-H, the youngest participants are Cloverbuds (5–7 years old); the next age level is Juniors (8–13 years old); and the oldest participants are Seniors (13–18 years old). Each age group uses a different robotics platform. Check the website to see what platforms are currently being used: <http://4hrobotics.msucare.com/resources/support>.

Once you have established your target audience, it's time to get trained. Typically, Extension agents select what programs they will offer in the county in October for the upcoming year. It is not impossible to start at a different time of the year,

but you will start off behind. Training sessions are usually conducted in the fall for Extension agents or on an as-needed basis throughout the year. Once your Extension agent is trained, he or she can then train volunteers or request a training session for a group of six or more volunteers. Training opportunities are available over interactive video at your county Extension office and face-to-face, depending on availability of travel funds.

Now that you have been trained, it's time to recruit participants. This is the easiest part of the process. Young people of all ages are generally eager to learn more about robotics. You can work with your Extension agent to recruit from local schools, churches, civic groups, after-school groups, and homeschool associations. Promotional materials, including brochures and flyers, are available at <http://4hrobotics.msucare.com/resources>, or your Extension agent can request copies from Extension Printing.

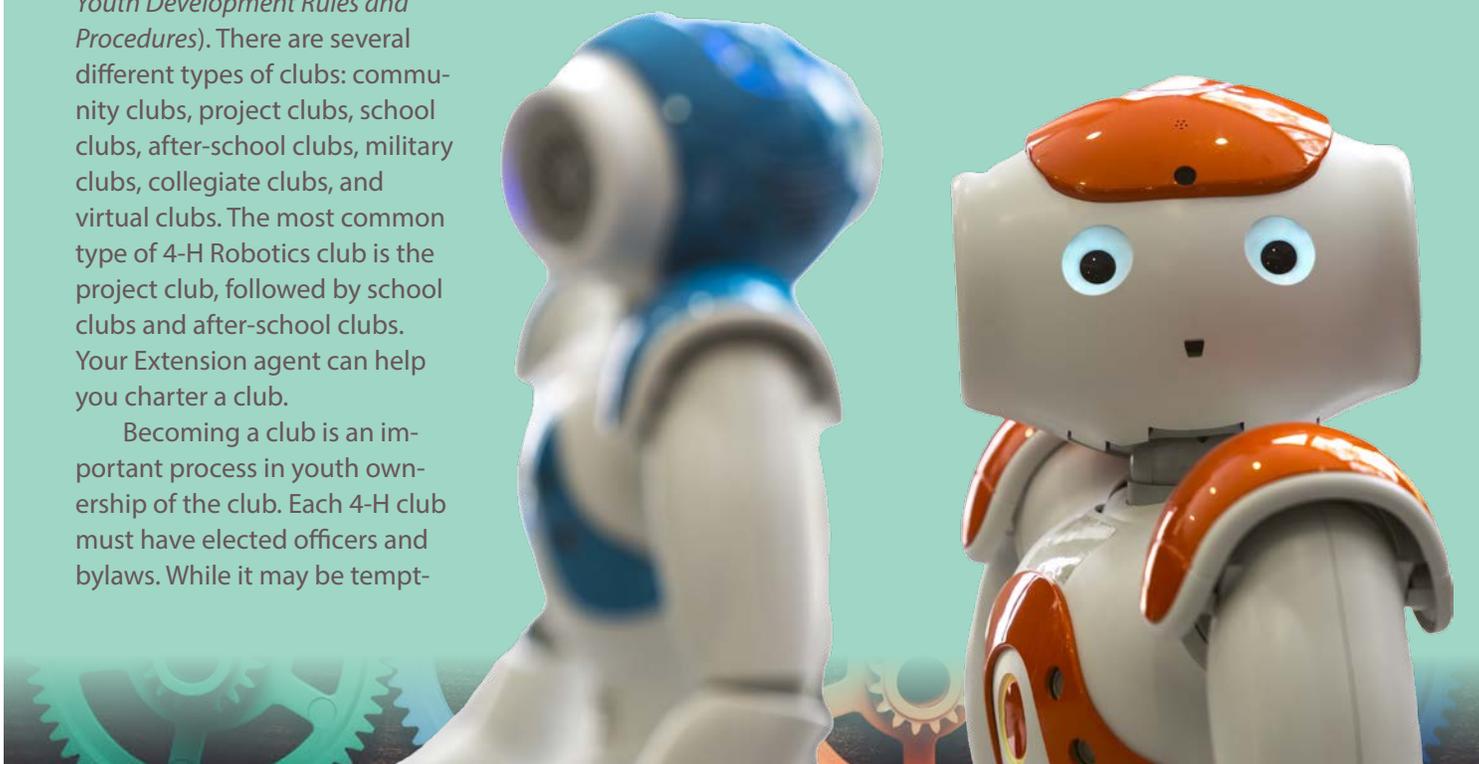
Be sure that you are recruiting the age group you were trained to lead. It is also a good idea to identify the type of 4-H unit you will be—individual, group, or club. It is perfectly normal for a 4-H Robotics club to begin as one or two young people enrolling in 4-H as individual members working with their volunteer and Extension agent. As the group begins to grow, they may wish to become a chartered 4-H club. Any group must be chartered to use the 4-H name and emblem (see Extension Publication 2431 *Mississippi 4-H Youth Development Rules and Procedures*). There are several different types of clubs: community clubs, project clubs, school clubs, after-school clubs, military clubs, collegiate clubs, and virtual clubs. The most common type of 4-H Robotics club is the project club, followed by school clubs and after-school clubs. Your Extension agent can help you charter a club.

Becoming a club is an important process in youth ownership of the club. Each 4-H club must have elected officers and bylaws. While it may be tempt-

ing to organize the meetings and the minutes, it is important to let 4-H'ers drive the learning agenda. If they have a vested interest in the process, they are more likely to stay with it. Once club officers are elected, have them meet with the volunteer and agent to decide how they want to run club meetings. Also discuss what experiences they might want specific to robotics or other project areas that might complement their interests (for example, the electricity project area).

Unless you have access to unlimited resources, the next thing on the agenda is to find equipment! This means robots, computers, batteries, and so forth, and it all equals a good bit of money. You might be thinking to yourself, "Shouldn't having a robot be higher on the list?" The answer is no. Initial club meetings should focus on teamwork and concept-building, which gives you a little more time to locate the equipment and materials you need.

As resources permit, Extension agents can check out a robot from the Extension Center for Technology Outreach. However, these are available on a first-come, first-serve basis and are very limited. It is much easier if the club has its own robot. Chartered clubs may conduct fundraisers if approved by the local Extension agent. Only chartered clubs may use the 4-H emblem and colors in fundraising efforts. Additionally, Extension agents may apply for grants on behalf of the county or club. Be sure to include in your club by-laws how any funds raised will be accounted for and spent.



The local county Extension office must oversee all collected club money.

Now that you have the volunteers, participants, and equipment needed, it's time to keep going! Schedule regular club meetings, and make sure every member has a part to play. This can mean assigning one 4-H'er to find and bring a healthy snack, one to lead the teamwork exercise, one to be in charge of making sure all of the equipment is put back, and so forth.

In order to avoid burnout, it is important to rotate volunteers in and out as needed or rotate volunteers' responsibilities. One month, a volunteer might be in charge of helping 4-H'ers program, and, the next month, that volunteer might lead a session on how to prepare a speech. Remember, different volunteers have different talents and should contribute accordingly.

As your group comes together, some 4-H'ers will naturally lean more toward building and programming. While completely normal, it is important to encourage young people to explore new areas. This might mean building a creative robot-themed snack or organizing an Arduino sewing workshop for Halloween or Christmas pageant costumes. Did you know many Extension agents can teach sewing classes?

Once your group has formed an identity, it's time to start preparing for contests. Senior 4-H'ers compete at 4-H Club Congress. Juniors compete at District Project Achievement Days. This is an opportunity for 4-H'ers to test what they have learned against others in the state or district. Ask your Extension agent for details on contests.

As you work to establish your 4-H Robotics club, it is important to remember why you began this journey in the first place. More than likely, you wanted to help your child or the young people in your community learn something new and grow in their newfound knowledge. Take pride in what you have accomplished and celebrate each small victory, whether that is learning a new programming command or seeing your 4-H'ers give their first presentation at a contest. Your investment of time, energy, and resources is changing the future for the young people you empower and the community in which you live.



STARTING A 4-H Robotics Club CHECKLIST

- ✓ Call your local county Extension office.
- ✓ Volunteer to lead a project group or club.
- ✓ Complete an application and background check.
- ✓ Decide which age you will work with (Cloverbud, Junior, Senior).
- ✓ Send Extension agent for training, or
- ✓ Request training for at least six people in your county.
- ✓ Get trained.
- ✓ Write short-term goals.
- ✓ Dream of long-term goals.
- ✓ Host interest sessions, booths, or mini-camps.
- ✓ Sign up interested young people in 4-H.
- ✓ Conduct your first meeting (have fun!).
- ✓ Find a robot.
- ✓ Conduct fundraising.
- ✓ Keep going!
- ✓ Recruit more volunteers and rotate duties.
- ✓ Prep for contests.
- ✓ Watch 4-H'ers learn and grow.
- ✓ Feel pride in what you have accomplished.
- ✓ Invest in the future of your 4-H'ers and community.





MISSISSIPPI STATE
UNIVERSITY™

EXTENSION

Publication 3024 (POD-02-17)

By **Dr. Mariah Smith Morgan**, Assistant Extension Professor, Extension Center for Technology Outreach.

Copyright 2017 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi State University Extension Service.

Produced by Agricultural Communications.

We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. GARY B. JACKSON, Director