



4-H LEGO® ENGINEERING



The goal of the Mississippi 4-H LEGO® Engineering Club is to provide youth, ages 5-18, with opportunities to engage in hands-on learning experiences that enable them to develop the skills in engineering design process, teamwork, and communication. Objectives of this project include: (1) Provide a safe environment in which youth can participate. (2) Offer training to Extension Agents and volunteers. (3) Deliver fun, informal educational opportunities which provide hands-on learning opportunities for youth. (4) Create interest in robotics and other STEM (Science, Technology, Engineering, and Mathematics) related projects. There is a place for you in the 4-H LEGO® Engineering Club!

Starting Out Beginner

4-H'ers ages 5-8 years old can take part in their local, county-based 4-H LEGO® Engineering Clubs. Youth work hands on with partners to imagine, design, construct, and test out their creations.

This is a fun way for young 4-H'ers to get acclimated to the 4-H environment, learn the 4-H pledge, and most importantly, learn by doing!

Learning More Intermediate

Junior 4-H'ers (8-13 years old) can take part in this project by participating in local club meetings and camps. Each curriculum has additional activities that can be used to supplement the lesson, scaling it up for older 4-H'ers.

Youth can build social skills while exploring new project areas. This club is designed to show 4-H'ers other projects they may like.

Exploring Depth Advanced

Senior 4-H youth (ages 14-18 years old) typically serve as local camp counselors or volunteer to assist with 4-H STEAM Day.

Senior 4-H'ers can mentor younger 4-H'ers and help them prepare for events and competitions.

4-H Thrive

Positive Youth Development

Developing Competence

Adults create environments where youth can develop competence in their chosen project area.

Building Confidence

Youth build confidence as they learn to think for themselves, build mastery, and are recognized for their efforts.

Nurturing Caring

Adults nurture a caring environment where mutual trust between youth and adults is established. Caring relationships with adults are key to resilient youth.

Finding Connection

Youth build solid connections which are critical to their well-being.

Forming Character

Create a community where youth play an active role in developing their character.

Determining Contribution

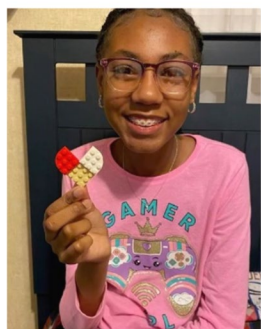
Youth actively contribute to their clubs and communities.

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Expand your experiences!



In addition to events at the county and region level, 4-H youth can also participate in statewide events. These events are 4-H STEAM Day which features contest for both the Cloverbuds and Juniors. While Cloverbuds are not scored and ranked, they are allowed to participate so that they can get used to working together as a team and speaking with judges. 4-H STEAM Day also features contests in LEGO Building, ScratchJr., Makerspace, Art, Science Snacks, and recording a science experiment in a studio. 4-H STEAM Day is typically held in June.

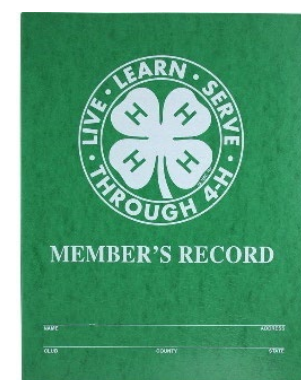


Cloverbuds, Juniors, and Seniors can participate in the 4-H Robot Round-Up at the Mississippi State Fair. This event is held during 4-H Day at the Fair. 4-H'ers design a display based off the designated theme and bring their creation with them to the Fair. At the Fair, the present their display to the judges to see who will win, Best in Show.

Resources

Cordero-Irizarry, P. M. et al., (2023). The 6 C's of Positive Youth Development: Developing Competence in Youth. P3893. Mississippi State University Extension Service, MS.

Morgan, M. and Petrowski, M. (2023). 4-H Cloverbud Record Book. P3926. Mississippi State University Extension Service, MS.



Connections & Events

For Cloverbuds & Juniors:

- Project Achievement Days (PAD)
- STEAM Day
- State Fair

For Seniors:

- State Fair

Contact your local Extension office to discover additional opportunities.

Curriculum

4-H LEGO® Engineering Club • Volume 1

4-H LEGO® Engineering Club • Volume 2: On the Farm

4-H LEGO® Engineering Club • Volume 3: Enchanted Builds

4-H LEGO® Engineering Club • Volume 4: I CAN with 4-H

4-H LEGO® Engineering Club • Volume 5: Social Emotional Well-Being

4-H Record Book

The 4-H Record Book is an opportunity for youth to reflect on their project and to record information about their activities and lessons learned throughout the year.

Typically, a LEGO project area record book is submitted under Engineering. As a reward for hard work, 4-H'ers can receive awards and/or recognition through money and/or trips. Additionally, record books may be used to inform the Congressional Award Record book.

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