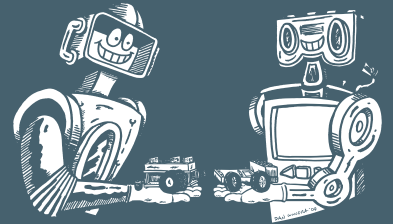
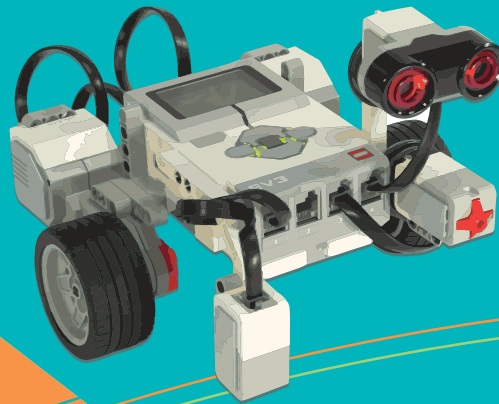
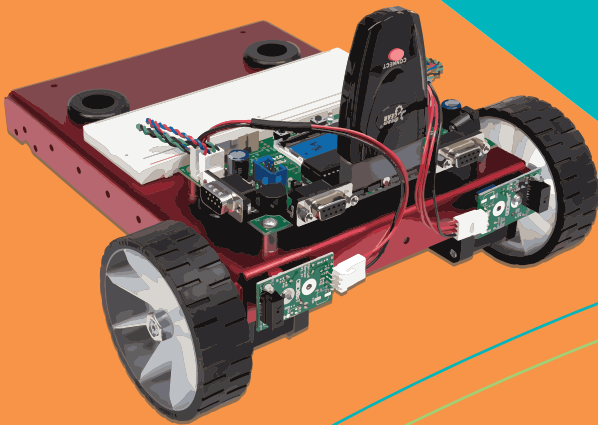


NEBRASKA ROBOTICS EXPO



#NERoboticsExpo



 **CEENBoT™**
SHOWCASE 

 **FIRST®**
LEGO®
LEAGUE 

 **CREATIVE VISUAL
ARTS EXPO** 

nerobicsexpo.unl.edu 

UNIVERSITY OF
Nebraska
Lincoln

Saturday, February 18, 2017
Strategic Air Command & Aerospace Museum
Ashland, Nebraska

UNIVERSITY OF
Nebraska
Omaha

CEENBoT™ SHOWCASE

Welcome to Nebraska Robotics Expo

The Expo represents a collaborative effort between the SPIRIT Project and the Nebraska 4-H Youth Development project, and FIRST® LEGO® League to create an outstanding robotics competition for about 1,000 of our local and greater Nebraska area youth. As you cheer on our future scientists and engineers, we encourage you to visit the CEENBoT™ Showcase, FIRST LEGO League events, sponsor booths, and museum exhibits.

The CEENBoT Showcase features a custom robot developed through the SPIRIT project called the 324 CEENBoT. This “open-source” robot has a totally new and enhanced platform featuring multiple autonomous programming options that include a TI Graphing Calculator Interface, a Graphical Programming Interface (GPI), and programming in the C language with an Application Programming Interface (API).

Public Invited to Play

A feature of the showcase is the CEENBoT Games, open to the general public, including kids of all ages! We have booths set up for anyone to explore the 324 CEENBoT. Come play games such as CEENBoT Tae Kwon Do, “Minute to Win It,” Driving a Maze, Bumpbot Mode, Precision Driving, and more.

Creative Visual Arts Expo

Again this year at the 2017 Nebraska Robotics Expo — we are excited to have the Creative Visual Arts Expo featuring robotic-inspired art pieces selected from 70+ entries created by K-12 students from several local participating schools! This year's Creative Visual Arts Expo continues a growing robotics art display at the Nebraska Robotics Expo, showcasing student creativity and their understanding of robotics at the intersection of art and science. The coordinator for this event, Tom Orange, is hosting robotic art demonstrations during the day inside the entrance of Hangar A.

The CEENBoT Showcase

The 2017 Nebraska Robotics Expo marks the ninth season for the CEENBoT Showcase. There are 92 teams participating this year from 26 Nebraska elementary, middle, and high schools and organizations. This year we celebrate the theme of “CEENBoT Carnival”. We invite you to take in the many activities and enjoy this day of excitement and anticipation as our youth demonstrate the possibilities of STEM achievement and creativity in the context of robotics.

About CEENBoT Robotics

The CEENBoT Robotics program has its roots in the SPIRIT grant project, which stands for the Silicon Prairie Initiative for Robotics in Information Technology. The SPIRIT program was funded by the National Science Foundation (NSF) and has provided the instructional foundation needed to help teachers to use educational robotics to teach important science, technology, engineering, and mathematics (STEM) concepts. The current CEENBoT Robotics program combines the technical expertise of engineering professors and staff in the University of Nebraska–Lincoln Department of Electrical and Computer Engineering with the educational expertise of professors and staff in the College of Education at the University of Nebraska at Omaha.

This collaboration has created a national educational STEM robotics curriculum for middle schools.

About the SPIRIT Program

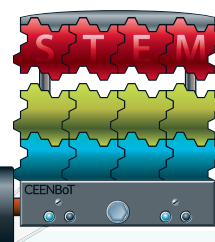
Through the initial funding for the SPIRIT program, more than 500 teachers have been trained in NSF extended workshops and graduate courses, and more than 300 Internet-based lesson plans have been created. Teacher surveys and student assessments have documented significant growth in problem-based learning, robotics, electronics, and engineering design. Educators are encouraged to check out the extensive SPIRIT website at the following URL: tekbot.unl.edu/SPIRIT2. Participating schools and teams for this year's Expo are listed on page 3.



CEENBot Showcase Teams

School	Division	Team Name
Academy	Elem	Academy C
	HS	Academy A
	MS	Academy B
Anderson Middle School	MS	AMS1
	MS	AMS2
	MS	AMS3
	MS	AMS4
	MS	AMS5
Bellevue West HS	HS	Thunderbot Charlie
	HS	Thunderbot Bravo
	HS	Thunderbot Alpha
Bryan Middle School	MS	Bionic Bears
Christ the King	MS	Nutty Coconuts
	MS	Happy Dinos
	MS	Angry Alpacas
	MS	Stuffed Oreos
	MS	The Cheesy McGees
Conestoga Public	MS	The Generals
	HS	404 Team Net
	HS	Conestoga 1
	HS	Conestoga 2
Creighton Prep	MS	Three Musketeers
	HS	CP30
	MS	Dragon Maze Runners
	MS	Aviator Code Force
Davis Middle School	MS	Tuskegee Bots
	MS	B-29 Superfortress Fifi
	MS	Storm 1
	MS	Storm 2
Elkhorn Valley View	MS	Storm 3
	MS	Storm 4
	HS	Bluejays 1
	MS	Bluejays 2
Guardian Angels CC	MS	Bluejays 3
	MS	RoboBears
Home School	MS	Waterbots
Innovators 4-H	HS	Firebots
	MS	Firebots
Lewis & Clark Middle	MS	Lewis & Clark Robotics Club
	MS	Lewis & Clark Pioneers
	MS	Lewis & Clark Pathfinders
	MS	Lewis & Clark Pride
	MS	Lewis & Clark Corp
Liberty Middle School	MS	Lewis & Clark Navigators
	MS	Liberty Eagles #1
Loveland Elementary	MS	Liberty Eagles #2
	Elem	Loveland Lynx 1
Marian HS	Elem	Loveland Lynx 2
	HS	AquaPhoenix
Millard North Middle	HS	Mind Master Mustangs
	MS	Enter Team Name

School	Division	Team Name
Millard North Middle	MS	Three Musketeers
	MS	Bengal Tigers
	MS	Non-Artificial Intelligence
	MS	Pandacorn
	MS	Mustang Manual 4
	MS	Mustang Manual 3
	MS	Mustang Manual 2
Mission Middle School	MS	Mustang Manual 1
	MS	Cardboard R Us
	MS	Brave Robotics
	MS	Duct Tape Crew
Oakdale Elementary	MS	The Brave Team
	Elem	W^3 Tigers
	Elem	Rocking Robots
	Elem	Retro Robots
Pine Creek Elementary	Elem	Dream Machines
	Elem	Moonbots
	Elem	Rockbots
	Elem	Rockbots
Rockbrook Elementary	MS	Tara Tigers 1
	MS	Tara Tigers 2
	MS	Tara Tigers 3
	MS	Tara Tigers 4
Tara Heights	Elem	Westgate Gators
	Elem	Electronic Giraffes
	Elem	Robo Cops
	Elem	Robotic Masters
Westgate Elementary	Elem	Robo Ladies
	Elem	High Tech Potatoes
	Elem	2 Girls and a Bot
	Elem	Mustang Minions
Whitetail Creek	Elem	Cather Boys
	Elem	Mustang Robotics
	Elem	Cather's Elementary Engineers
	Elem	Motorized Mustangs
Willa Cather Elementary	MS	Out of the Box
	MS	Mighty Middle Engineers
	MS	Rough & Ready Roboters
	MS	Tenacious Tandem
York HS	HS	York Gold
	HS	York Blue
	HS	York Black
	HS	York White



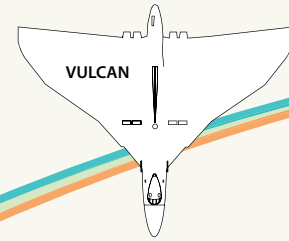
**Science
Technology
Engineering
Mathematics**

CEENBot Showcase



Strategic Air Command & Aerospace Museum

www.sacmuseum.org

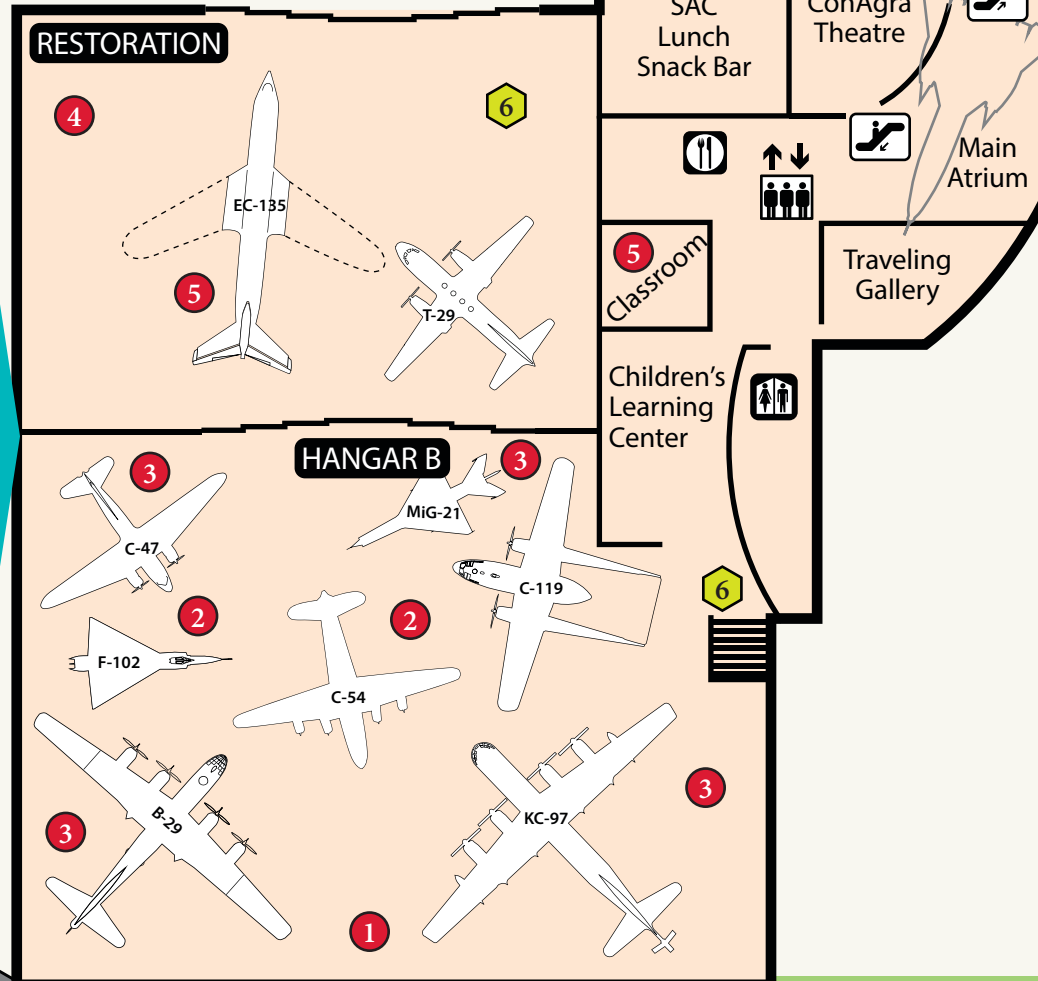


Schedule of Events

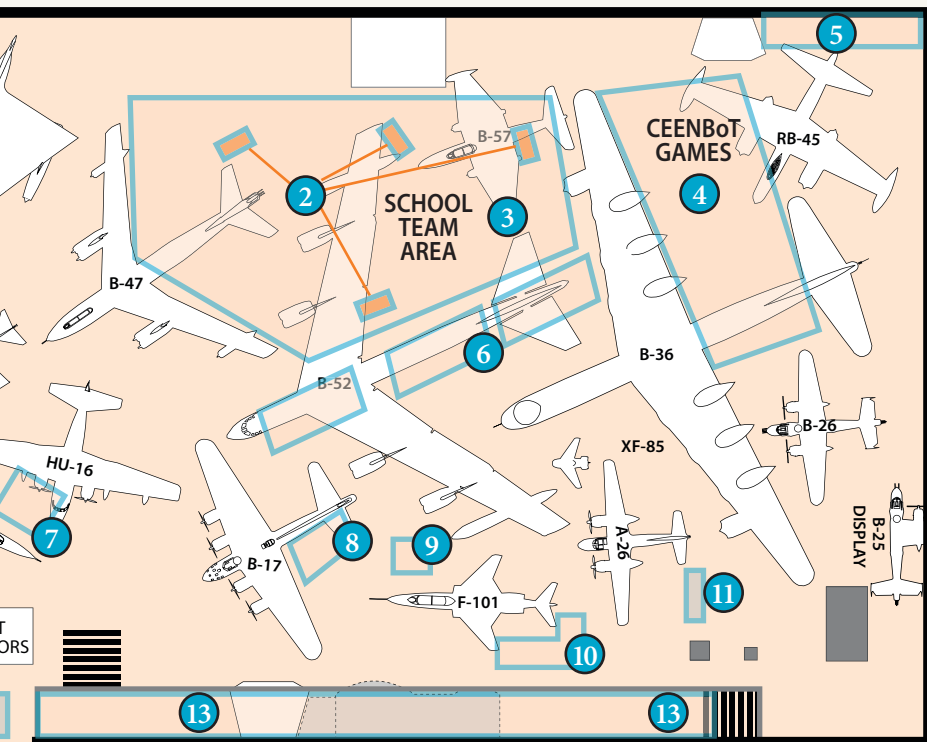
- 7:30 am Team Check-In
- 8:30 am Opening Ceremony (Atrium)
- 9:00 am FLL events begin (Hangar B and Restoration Hangar)
- 9:30 am CEENBoT Showcase events begin (Hangar A)
- 9:30 am - 3:30 pm Free Events and Competitions
- 4:00 pm FLL Closing Ceremony (Hangar B)
- 4:00 pm CEENBoT Showcase Closing Ceremony (Hangar A)

FIRST LEGO League: Hangar B

- 1 FLL Robot Game Tables
- 2 FLL Practice Tables
- 3 FLL Pit Tables
- 4 FLL Volunteer Area
- 5 FLL Judging Area
- 6 Lunch area
- 7 FLL Registration Tables
- 8 Sponsor Booths
- 9 Creative Visual Arts Expo

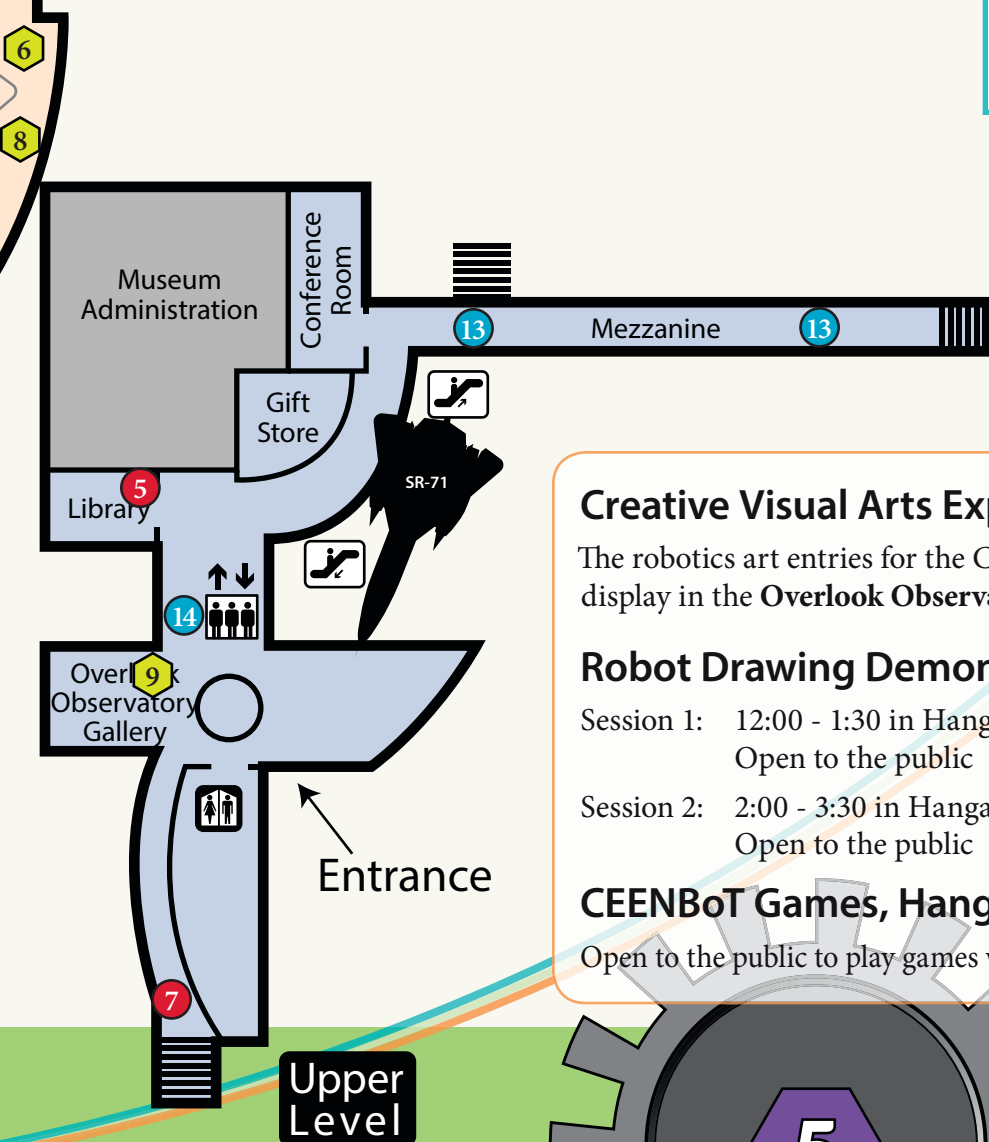


Lower Level



CEENBot Showcase: Hangar A

- 1 Practice Area
- 2 Charging Stations
- 3 School Team Area
- 4 CEENBot Games
- 5 Tech Repair
- 6 Driving Arenas
- 7 Art Demo
- 8 Navigation
- 9 Ball Course
- 10 Autonomous Maze
- 11 Awards Area
- 12 Snacks
- 13 Exhibitor Robotics & STEM Displays (on the Mezzanine)
- 14 CEENBot Registration



Creative Visual Arts Expo 9

The robotics art entries for the Creative Visual Arts Expo are on display in the **Overlook Observatory Gallery**.

Robot Drawing Demonstration and Art Activity: 7

Session 1: 12:00 - 1:30 in Hangar A
Open to the public

Session 2: 2:00 - 3:30 in Hangar A
Open to the public

CEENBot Games, Hangar A 4

Open to the public to play games with the CEENBot and win a prize.

FIRST® LEGO® LEAGUE

About Nebraska 4-H

The mission of Nebraska 4-H is to empower youth to reach their full potential working and learning in partnership with caring adults. Nebraska 4-H strives to help young people achieve their greatest potential by introducing high-quality youth development experiences into the lives of Nebraska youth and families. Engagement in 4-H results in youth who are making positive decisions related to their health and their future goals. Further, they are advocates and leaders determined to leave a lasting impact on Nebraska.

Learn more about Nebraska 4-H at 4h.unl.edu.

About FIRST®

FIRST® (For Inspiration and Recognition of Science and Technology) was founded in 1989 by inventor Dean Kamen to inspire young people's interest and participation in science and technology. Based in Manchester, NH, FIRST is a 501(c)(3) not-for-profit public charity. FIRST is supported by a strong network of sponsors and volunteers.

FIRST provides the FIRST Robotics Competition (FRC) and FIRST Tech Challenge (FTC) for students in grades 7-12, the FIRST LEGO League (FLL) for grades 4-8 (ages 9 to 14), and the FIRST LEGO League Jr. for grades K-3 (ages 6 to 10). For more information, visit 4h.unl.edu/first-robotics.

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FIRST LEGO League

Children are immersed in real-world science and technology challenges as part of the FIRST LEGO League Program. Teams build LEGO-based robots and develop research projects. Through their participation, children develop valuable life skills and discover exciting career possibilities while learning that they can make a positive contribution to society.

Children ages 9 to 14* get to:

- Strategize, design, build, program, and test a robot using LEGO MINDSTORMS® technology
- Create innovative solutions for challenges facing today's scientists as part of their research project
- Apply real-world math and science concepts
- Develop employment and life skills, including critical thinking, time management, collaboration, and communication while becoming more self-confident
- Engage in team activities guided by FLL Core Values
- Become involved in their local and global community
- Choose to participate in official tournaments and local events coordinated by their community

* ages 9 to 16 outside the U.S. and Canada.

LEGO, MINDSTORMS, and their respective logos are registered trademarks of the LEGO Group.

FIRST LEGO League in Nebraska

The FLL Planning Committee gives special thanks to the Nebraska 4-H Foundation for sponsoring FIRST LEGO League, including awards, audiovisual equipment and operation, volunteer hospitality, and volunteers.

We also thank all judges, referees, coaches, and adult volunteers. You make FLL possible for Nebraska!



FIRST LEGO League Teams

Number	Team Name	Team City
162	League of Lions	Omaha
169	ChewbaccaBots	Omaha
449	The Humu humu nuku apua's	Humboldt
450	Dabbing Dinosaurs	Humboldt
1329	Miscellaneous Purple Domination	Omaha
1414	Autobots	David City
1809	The Dark Side	Mound City, MO
1971	Data Dragons	Omaha
4096	Team Twisters	Wayne
5105	Trial and Error	Lincoln
6637	EV3 Stampede	South Sioux City
7359	Minions in Disguise	Columbus
7411	Papillion Middle School	Papillion
9108	League of Legos 2.0 *	Omaha
10343	South Omaha Boys & Girls Club	Omaha
10344	Council Bluffs Boys & Girls Club of the Midlands	Council Bluffs, IA
10350	North Omaha Boys & Girls Club	Omaha
10381	Robbie's Dream Team	Sidney
10988	Building Bulldogs	Louisville
12802	The Swarm	Lincoln
13813	Pioneerbots	Nebraska City
14117	Spartabots I	Grant
14206	Super Scouts White	Bellevue
15021	B.E.R.T. 5.0	Papillion
15109	The Optimus Primates	Sidney
15990	The Bench-Pressing T-Rexes *	Omaha
16103	Tech-Nerds *	Lincoln
16160	Revamped	Pawnee City
17758	Robodogs Red	Bellevue
17809	The Hive	Tecumseh

Number	Team Name	Team City
18931	Dream World Dragons	Omaha
19198	Gear Gators	Albion
19424	Robodogs Yellow	Bellevue
20912	Team Beast Mode *	Saint Edward
21217	Heartland Robobots	Henderson
21879	O-C KnighTroBots	Oakland
21945	N.E.R.D.S	Tecumseh
22598	Designing Dream Makers	Louisville
22943	Spartabots II	Grant
23220	The Blue Geckos	Lincoln
24620	K9 Strikers	Omaha
25020	Cy-Dawgs	Henderson
25704	Fearsome Peeps	Lincoln
28659	Feathered Fighters	South Sioux City
28695	Rebel Robotics	Norfolk
29445	Blazing Tiger Bot Builders	Mitchell
29476	Warrior Robotics	Fullerton
29739	LEGO Lassie	Concord
1368	Kearney Catholic Stars 1 **	Kearney
7693	Super Scouts Purple **	Bellevue
15458	Central Sandhill MechTech **	Mullen

* Global Innovation Award Candidate

** Global Innovation Award Candidate Only



FIRST LEGO League Core Values

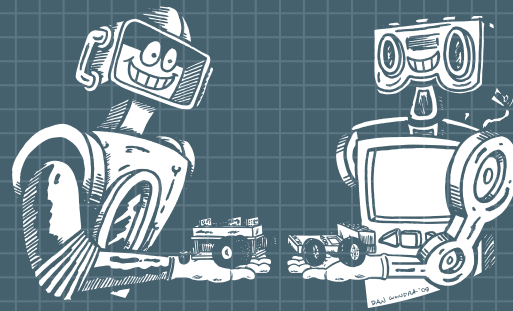
- We are a team.
- We do the work to find solutions with guidance from our coaches and mentors.
- We honor the spirit of friendly competition.
- What we discover is more important than what we win.
- We share our experiences with others.
- We display gracious professionalism in everything we do.
- We have fun.

Get involved with FIRST LEGO League:

Contact Brandy Wagner
Nebraska FLL Affiliate Partner
4-H Youth Development
University of Nebraska-Lincoln
bwagner5@unl.edu
(402) 472-9023

Or visit 4h.unl.edu/nebraskafirstrobotics

Special Thanks:



Our Event Sponsors

GOLD

(\$2,500 +)



SILVER

(\$1,000 +)



Coordinating Organizations



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