

# 2020 | NEBRASKA ROBOTICS EXPO



**CEENBoT™**  
SHOWCASE

CREATIVE VISUAL  
**ARTS EXPO**

**FIRST®**  
**LEGO®**  
LEAGUE

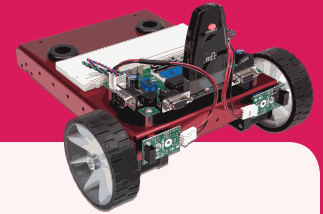
   **#NERoboticsExpo**  
[neroboticsexpo.unl.edu](http://neroboticsexpo.unl.edu) 

UNIVERSITY OF  
**Nebraska**  
Lincoln

**Saturday, February 22, 2020**  
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 fun of robotics! Come play games such as Bowling, Distracted Driving, BoT Rodeo, Precision Driving, PlinkBoT, BoT Putt Putt, Figure 8 and Flat Track Race.

## Creative Visual Arts Expo

Again this year at the 2020 Nebraska Robotics Expo — we are excited to have the Creative Visual Arts Expo featuring robotic-inspired art pieces selected from 90+ entries created by K-12 students from five 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 (see page 5).

## The CEENBoT Showcase

The 2020 Nebraska Robotics Expo marks the twelfth season for the CEENBoT Showcase. There are 146 teams participating this year from 22 Nebraska elementary, middle, and high schools and organizations. This year we celebrate the theme of “Rockin’ the Bots.” 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.

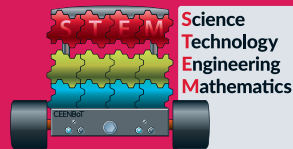
## About CEENBoT Robotics

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 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](http://tekbot.unl.edu/SPIRIT2). Participating schools and teams for this year's Expo are listed on page 3.



## 2020 CEENBot Showcase Teams

### Elementary Division

School	Team Name	School	Team Name	School	Team Name	
Aspen Creek	Team Unicorns	Oakdale	Five Robot Amigas	Rockbrook (cont.)	Rockbrookers	
	The Bots		Lightning Power Girls		Rockin' Rockys	
	The Dragons		Mr. Monkey's Magical Musical Martian Tigers		The Limboing Bulldogs	
	Unobtanium		Musical Foxes		The Ninjas	
De Roy Robotics Club	Engineering Pforce		Pause for the Claws		Spring Lake	Woof Woof Team
	Engineering Minions		Rose Thorns			Las X-bots
Kennedy	STEAM Stars		Singing Robots		St. Bernadette	Los pumas
	Dab Brothers		Snake Circuits			Los raptors de fuego
	Dark Fire Power		Team STEAM			Rockin' Robins Team 1
	Galaxy Girls		The Bumper Bots			Rockin' Robins Team 2
Kennedy - Girls in STEAM	King Fire Dragons	The Musical Robots	Westgate	Rockin' Robins Team 3		
	Undefeated Tigers	Tiger Bots		Back in Time Bots		
	Breakfast Club	#BabyYodaNation		Bot Band		
	Colorful Meerkats	Robotic Unicorns		Combots		
Nelson Mandela	Dance Dolls for Life	The Ice Queens	Westgate	JKA		
	Infinity Girls	The Robot Warriors		JTH		
	Lit Queens	The Sassy Scientists		JTJ		
	Multi-Color Girls	The Unicorns		Rocking Robots		
Nelson Mandela	Tiger Girls	The Unique Royalty Squad	Westgate	Westgate Fab Four		
	Katastic	The Wolves		WCS 1		
	Kings of Sports	Dogz Botz		WCS 2		
	Oklahoma	Rockbrook Descendants		WCS 3		

### Middle School Division

School	Team Name	School	Team Name	School	Team Name	
De Roy Robotics Club	Deja Vu Roboting	Millard North Middle	Appaloosas	Prairie STEM (cont.)	Imagine Dragon	
	Design and Drive		Arabians		Insert Name Here	
	Five STEM Guys		Broncos		Pringle Eaters	
	Jammin CeenBoters		Clydesdales		Rockets	
	Motorized Mustangs		Colts		Silver Archers	
	Moving Bots		Fillys		Taco Bots	
	Rockin Robotics		Harshi		The Eagles	
	Slow and Steadies		Mustang Men		Piece Of pi	
	Two Girls & A Bot		Mustangs		The Wild Cats	
EVVMS	EVV1	Mission Middle	Paint Horses	Scotus CC	Rocks Green	
	EVV2		Ponys		Rocks Three	
Guardian Angels CC	Bluejays 2		Quarter Horses		St. Bernadette	Rocks White
	Bluejays 3		Stallions			Shamrocks 1
	Bluejays 4		Thoroughbreds			They Talk too Much
	Bluejays 5		Bacon Pancakes			Fluffy Muffin Tigers Reign
	Bluejays 6		Electros			FVG
Kennedy - Girls in STEAM	Bluejays 7		Melcers		Westgate	GR
	McMac Elders		Radio Robots			NER
Lewis & Clark Middle	LC Navigators		Prairie STEM		Air	VSCobots
	LC Robotics Club	Good Luck Charlie Bots	Ice Foxes	Westgate	Westgate Girls Who Code	
					WMS Robotics	

### High School Division

School	Team Name	School	Team Name	School	Team Name
De Roy Robotics Club	Anvitha Boosani	Marian	Marian Mashup	Scotus CC	Rocks 1
Guardian Angels CC	Bluejays 1	Prairie STEM	2 Brunettes and a Blonde	York HS	York Blue
Madison	Dragon Claws				York Gold
	Flying Dragons				York White



# Strategic Air Command & Aerospace Museum

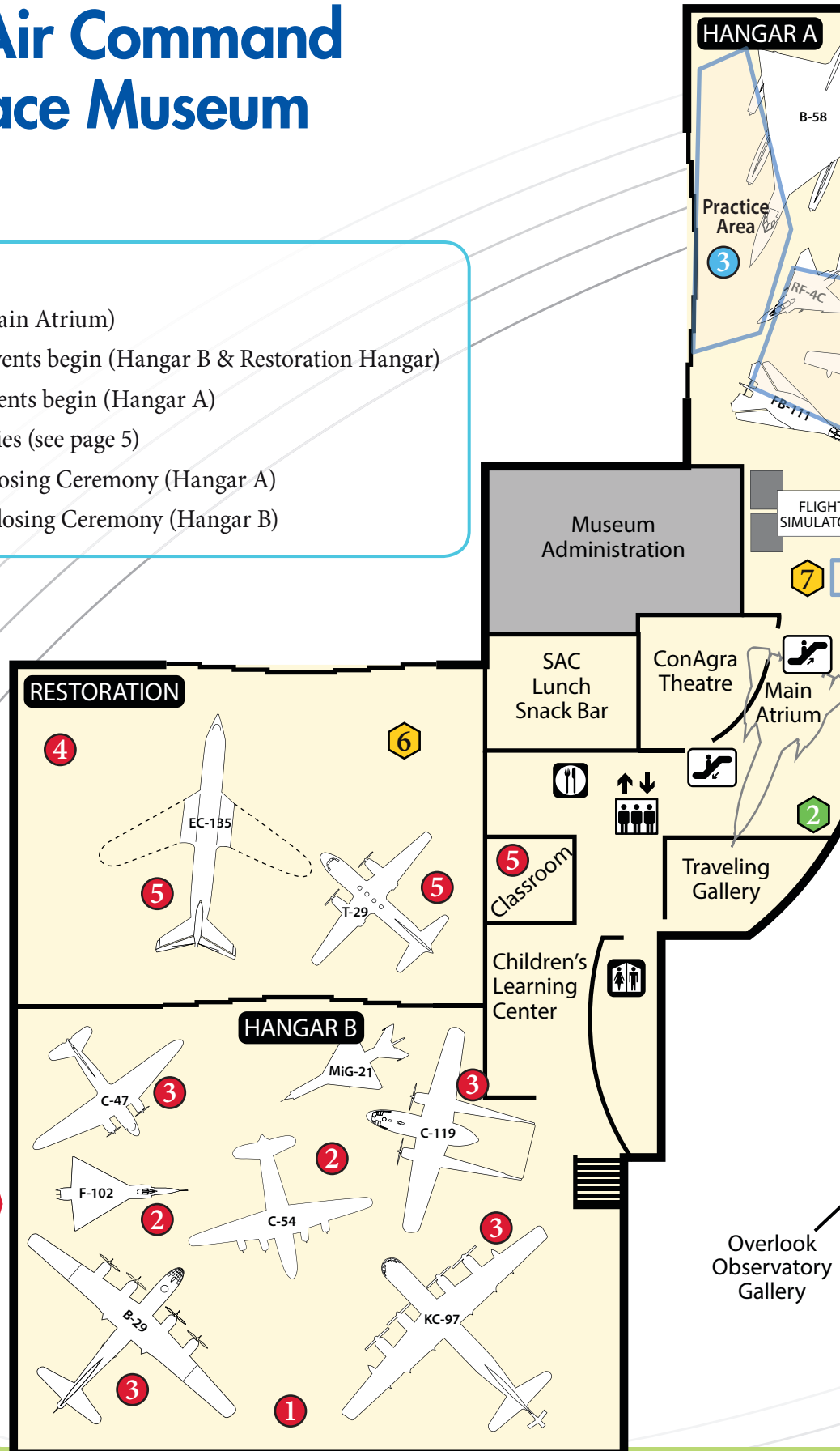
sacmuseum.org

## Schedule of Events

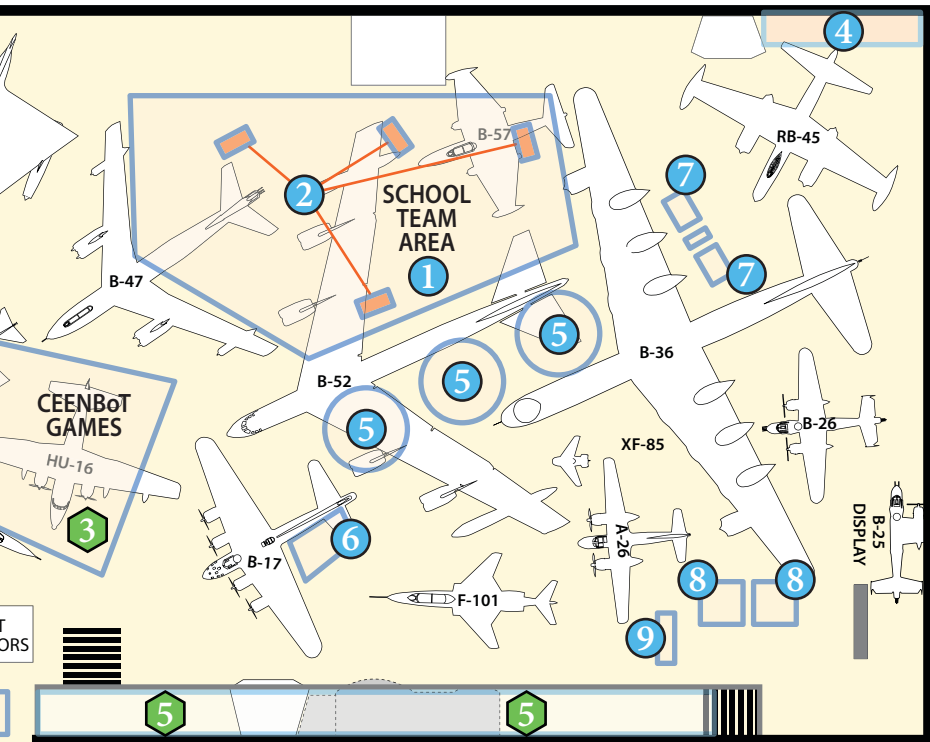
- 8:30 am Opening Ceremony (Main Atrium)
- 9:00 am *FIRST LEGO* League events begin (Hangar B & Restoration Hangar)
- 9:00 am CEENBoT Showcase events begin (Hangar A)
- 9 am - 3 pm Free Events and Activities (see page 5)
- 4:00 pm CEENBoT Showcase Closing Ceremony (Hangar A)
- 4:30 pm *FIRST LEGO* League Closing Ceremony (Hangar B)

## *FIRST LEGO* League: Hangar B

- 1 Robot Game Tables
- 2 Practice Tables
- 3 Pit Tables
- 4 Volunteer Area
- 5 Judging Area
- 6 Registration Tables



Lower Level

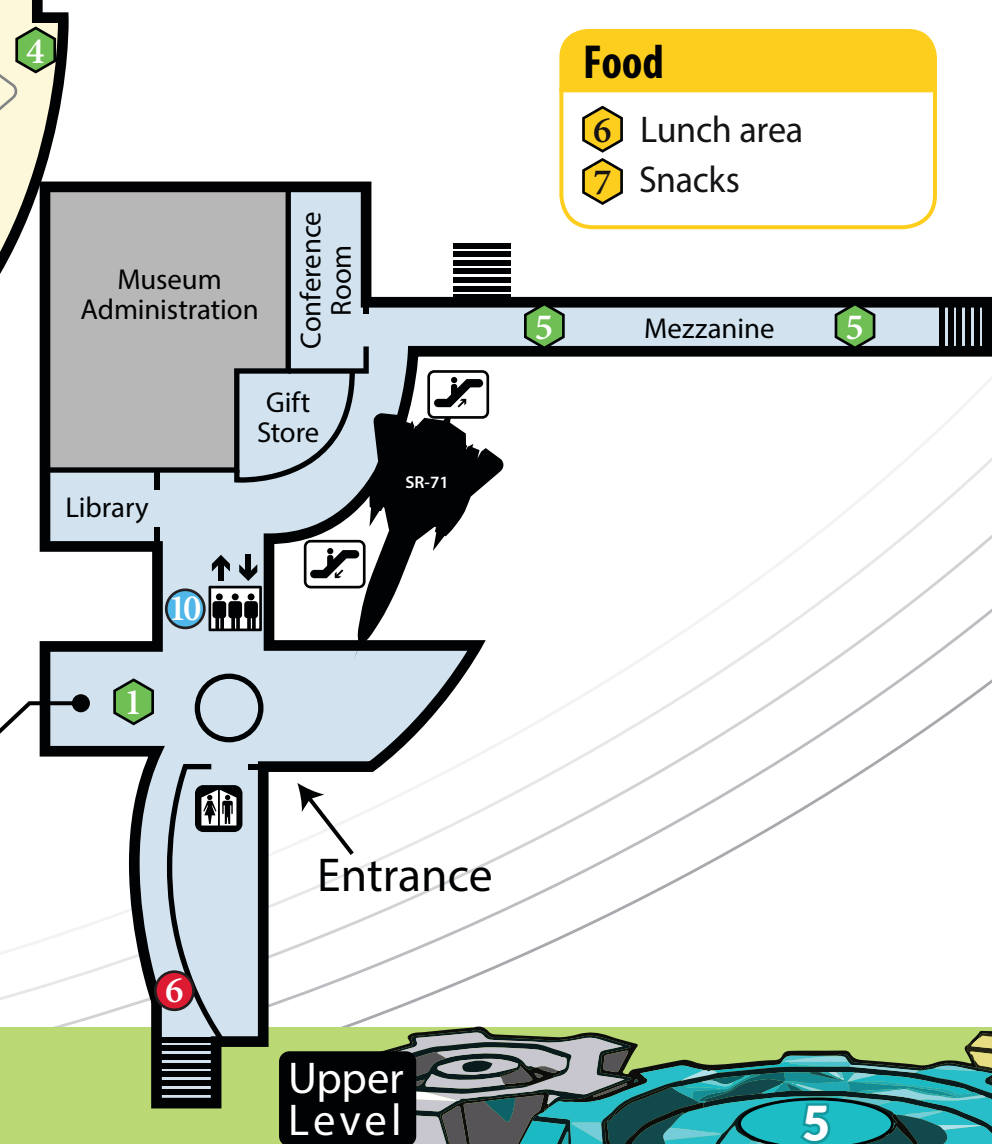


## CEENBoT Showcase: Hangar A

- 1 School Team Area
- 2 Charging Stations
- 3 Practice Area
- 4 Tech Repair
- 5 Competition Arenas
- 6 Navigational Course
- 7 Driving Course (A&B)
- 8 Autonomous Course (A&B)
- 9 Awards Stage
- 10 CEENBoT Registration

### Food

- 6 Lunch area
- 7 Snacks



## Something For Everyone! [OPEN TO PUBLIC]

### 1 Creative Visual Arts Expo

View robotics art entries displayed in the **Overlook Observatory Gallery**.

### 2 Robot Drawing & Art Activity

Session 1: 12:00 - 1:30  
Session 2: 2:00 - 3:30

### 3 CEENBoT Games

Play games with the CEENBoT and win a prize!

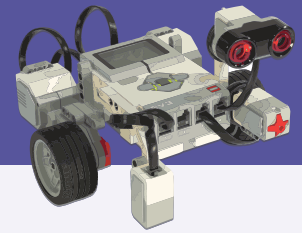
### 4 Sponsor Booths

Interact with our event sponsors.

### 5 Exhibitor Robotics & STEM Displays

Viewing and hands-on learning opportunities for robotics and STEM.

# 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](http://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 and FIRST Tech Challenge for students in grades 7-12, the FIRST LEGO League 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](http://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 FIRST LEGO League 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.

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## FIRST LEGO League in Nebraska

The FIRST LEGO League 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 FIRST LEGO League possible for Nebraska!

## 2020 FIRST LEGO League Teams

Number	Team Name	Team City
162	The Swagger Mcjaggers	Omaha, NE
169	Techno Lions	Omaha, NE
449	Titans 1	Humboldt, NE
450	Titans 2	Humboldt, NE
451	Titans 3	Humboldt, NE
1385	Robotics Llamas	Kearney, NE
1386	KCHS Stars 1*	Kearney, NE
1388	The Roboto Family	Kearney, NE
1971	Data Dragons	Omaha, NE
3775	Mindstormers: Neon Edition	West Point, NE
5105	Lincoln L.O.G.S.	Lincoln, NE
5553	A'ROR'N Bots	Aurora, NE
5781	City Savers	South Sioux City, NE
7691	East Butler TigerBots Gold**	Brainard, NE
8657	Astro Architects**	Council Bluffs, IA

Number	Team Name	Team City
12168	Team Kobra Kai	South Sioux City, NE
13813	Pioneer Bots Purple	Nebraska City, NE
14206	Super Scouts White	Bellevue, NE
15021	Logic Llamas	Bellevue, NE
15458	Central Sandhills MechTechs	Mullen, NE
15990	The T-Rexes Strike Back	Omaha, NE
19347	V-Raptors**	Humphrey, NE
21217	WarBots	Henderson, NE
21543	Nance County 4-H	Fullerton, NE
21831	The Gummies Strike Back	Scottsbluff, NE
22247	The Builders	Humphrey, NE
22943	Spartabots 2	Grant, NE
24620	Tech-no-difficulties*	Omaha, NE
25020	LEGOLORDS	Henderson, NE
25988	Lego Ninjas	Columbus, NE
26485	S.N.A.C.K.S.	Wayne, NE
27146	Hyannis Sandbots	Hyannis, NE
28655	GR Overdrive-Blue*	Rushville, NE
28659	Sharknadoz	South Sioux City, NE
28695	Rebel Robotics*	Norfolk, NE
31581	Lourdes Bots	Nebraska City, NE
33850	Lady Mustangs	Gordan, NE
37470	Gizmo Gang	Omaha, NE
38866	We are Peter 1*	Lincoln, NE
38867	We are Peter 2	Lincoln, NE
39750	The Architects	Council Bluffs, IA
39903	The Unknowns	Wayne, NE
41733	Mario Bot's	David City, NE
42233	Beat Bots	Norfolk, NE
43559	GR Overdrive-Navy	Rushville, NE
43707	The Saints	David City, NE
43803	Robo Rebels	Ogallala, NE
43852	Construction Production	Kearney, NE
46038	Funny Bunnies	Lincoln, NE
46248	Lego Legends	Falls City, NE
46250	Mighty 9	Falls City, NE
46265	RoboCats	Axtell, NE
46653	Power House*	Elkhorn, NE
47342	Dream Dogs*	Louisville, NE
48497	Bryan Boys & Girls Club	Bellevue, NE
49094	St. Philip Neri Pioneers	Omaha, NE
49358	WC Bots	Wilbur, NE
50015	Minecraft Monarchs	David City, NE
50018	The Processors	David City, NE

# CITY SHAPER



### Get involved with FIRST LEGO League:

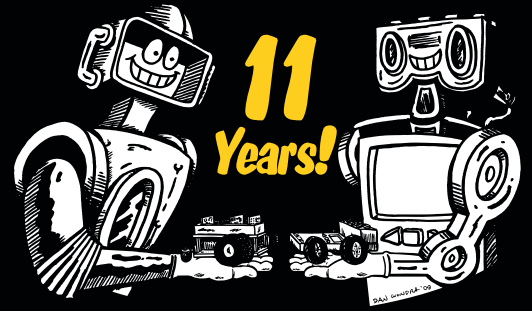
Contact Brandy W. Schulze  
Nebraska FIRST LEGO League Affiliate Partner  
4-H Youth Development  
University of Nebraska-Lincoln  
bwagner5@unl.edu  
(402) 472-9023

Or visit [4h.unl.edu/first-robotics](http://4h.unl.edu/first-robotics)

\* Global Innovation Award Candidate

\*\* Global Innovation Award Candidate Only

# Special Thanks:



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## COORDINATING ORGANIZATIONS



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