

# Tanana Valley Robot Rally



**Saturday, December 5, 2009 • 10:00 AM - 5:00 PM • Ryan Middle School**



## Transforming Transportation

Can *FIRST*® *LEGO*® League teams transform the way we look at transportation? The key to the 2009 "Smart Move" Challenge is accessing people, places, goods and services in the safest, most efficient way possible. In this journey, teams will consider many modes of transportation beyond their daily routine and streamline their options by making smart moves!



# Robot Missions

## AVOID IMPACTS...

**WARNING BEACONS** - Warning beacons need to be upright (square to the mat).

Value: 10 points each.

ALSO: Warning beacons are the touch penalty objects for the Smart Move Robot Game. This means each time you touch your vehicle while it's completely out of Base, the referee removes one upright beacon.



## SENSOR WALLS (AVOIDANCE OPTION):

Sensor walls need to be upright. Any four walls can count. Only four walls can count. Each upright sensor wall also requires a "down" access marker.

Value: 10 points each, max 40.



## SURVIVE IMPACTS...

**SENSOR WALLS (IMPACT OPTION):** No (zero) sensor walls are upright.

Value: 40 points.

**VEHICLE IMPACT TEST:** The truck needs to no longer touch the ramp's red stopper beam. If your entire vehicle is not completely out of Base during this mission, the referee removes two upright warning beacons.

Value: 20 points.



**SINGLE PASSENGER RESTRAINT TEST:** The crash-test figure needs to be aboard your vehicle for the entire match. Any constraint system is okay as long as the figure can be separated quickly after the match.

Value: 15 points.



**MULTIPLE PASSENGER SAFETY TEST:** All four people are sitting or standing in or on a transport device of your design, and some portion of that object is in the round target area.

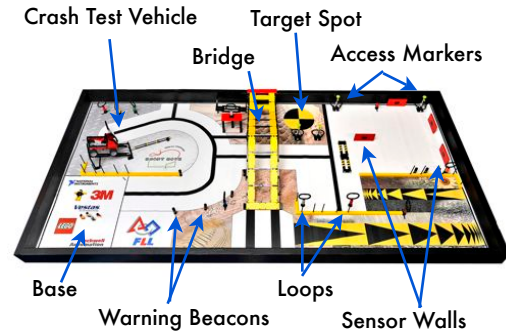
Value: 10 points.



## GENERAL SCHEDULE

10:00-10:30	Opening Ceremony
10:30-12:30	Matches & Judging Sessions Begin
12:30-1:00	Lunch Break
1:30-3:30	Matches & Judging Sessions Continue
3:30-4:00	Elimination Round
4:00-5:00	Closing Ceremony & Awards Presentation

## The Playing Field



Round 1						
Match	Start	Table	Side 1	Side 2		
1	10:30 A	1	OPEN	Special Zombie Force (#5156)		
2	10:35 A	2	U Park Falcons (#7173)	Scaradactyls (#631)		
3	10:40 A	1	Team Puffin (#1352)	BAM (#635)		
4	10:45 A	2	Twisted Wizards (#9065)	Santa's Little Engineers (#3800)		
5	10:50 A	1	Weller Lab Rats (#5202)	Super Friends (#632)		
6	10:55 A	2	Mr. Dudes (#6594)	Jack-In-The-Box (#633)		
7	11:15 A	1	Mabuhay (#9062)	Eagles 1 (#753)		
8	11:20 A	2	Lightning Lords (#5198)	Flaming-O's (#6591)		
9	11:25 A	1	Denali Panthers (#1082)	Geek Gods (#49)		
10	11:30 A	2	U Parks Flyers (#7174)	Eagles 2 (#755)		
11	11:35 A	1	I Love My Mommy Squad (#9431)	Wolverines (#9063)		
12	11:40 A	2	Timerwolves (#6872)	Eielson Lynx (#5762)		
13	11:45 A	1	S.U.R.G.E. (# 5151)	Crawford Caribou (#6067)		
Round 2						
14	11:50 A	2	Santa's Little Engineers	Eagles 1		
15	11:55 A	1	Weller Lab Rats	Lightning Lords		
16	12:30 P	2	Mabuhay	Mr. Dudes		
17	12:35 P	1	Eielson Lynx	OPEN		
18	12:40 P	2	U Parks Flyers	Denali Panthers		
19	12:45 P	1	Super Friends	Eagles 2		
20	12:50 P	2	Geek Gods	BAM		
21	12:55 P	1	I Love My Mommy Squad	Jack-In-The-Box		
22	1:00 P	2	Special Zombie Force	Wolverines		
23	1:05 P	1	Crawford Caribou	Flaming-O's		
24	1:10 P	2	U Park Falcons	Timerwolves		
25	1:30 P	1	Twisted Wizards	Scaradactyls		
26	1:35 P	2	S.U.R.G.E.	Team Puffin		
Round 3						
27	1:40 P	1	Denali Panthers	OPEN		
28	1:45 P	2	Mr. Dudes	Santa's Little Engineers		
29	1:50 P	1	Eielson Lynx	U Parks Flyers		
30	1:55 P	2	Super Friends	Timerwolves		
31	2:00 P	1	Geek Gods	U Park Falcons		
32	2:05 P	2	Flaming-O's	Mabuhay		
33	2:10 P	1	Jack-In-The-Box	Crawford Caribou		
34	2:15 P	2	BAM	Team Puffin		
35	2:20 P	1	Scaradactyls	Special Zombie Force		
36	2:25 P	2	Eagles 2	Twisted Wizards		
37	2:30 P	1	Lightning Lords	I Love My Mommy Squad		
38	2:35 P	2	Eagles 1	S.U.R.G.E.		
39	2:40 P	1	Wolverines	Weller Lab Rats		
Elimination Bracket						
Semi-Final			Final			
1						
3						
2						
4						

## Judging Sessions

### Research Presentation

Start	Room 1	Room 2
10:30 A	Weller Lab Rats	Super Friends
10:45 A	Crawford Caribou	Wolverines
11:15 A	Santa's Little Engineers	Special Zombie Force
11:30 A	Mr. Dudes	Twisted Wizards
11:45 A	BAM	Scaradactyls
12:30 P	Lightning Lords	Jack-In-The-Box
12:45 P	Timberwolves	Eagles 1
1:00 P	Eagles 2	Team Puffin
1:30 P	U Park Falcons	Flaming-O's
1:45 P	Mabuhay	S.U.R.G.E.
2:00 P	I Love My Mommy Squad	Eielson Lynx
2:15 P	Geek Gods	U Park Flyers
2:30 P	Denali Panthers	

### Teamwork Presentation

Start	Room 1	Room 2
10:30 A	Flaming-O's	Eagles 1
10:45 A	Lightning Lords	U Park Falcons
11:15 A	I Love My Mommy Squad	Weller Lab Rats
11:30 A	Mabuhay	Jack-In-The-Box
11:45 A	Wolverines	Eagles 2
12:30 P	Scaradactyls	BAM
12:45 P	Twisted Wizards	Eielson Lynx
1:00 P	U Park Flyers	Denali Panthers
1:30 P	Geek Gods	Timberwolves
1:45 P	Team Puffin	Crawford Carbiou
2:00 P	Mr. Dudes	Santa's Little Engineers
2:15 P	Super Friends	S.U.R.G.E.
2:30 P	Special Zombie Forces	

### Technical Presentation

Start	Room 1	Room 2
10:30 A	Eagles 2	U Park Flyers
10:45 A	Scaradactyls	Geek Gods
11:15 A	Super Friends	Eielson Lynx
11:30 A	U Park Falcons	Flaming-O's
11:45 A	I Love My Mommy Squad	Team Puffin
12:30 P	Santa's Little Engineers	Wolverines
12:45 P	Mr. Dudes	Crawford Caribou
1:00 P	S.U.R.G.E.	Lightning Lords
1:30 P	Jack-In-The-Box	Weller Lab Rats
1:45 P	BAM	Special Zombie Force
2:00 P	Denali Panthers	Twisted Wizards
2:15 P	Mabuhay	Eagles 1
2:30 P	Timberwolves	

## Robot Missions

### GAIN ACCESS TO PLACES

*(choose one)* Your vehicle needs to be in one of these positions exactly as the match ends (this mission does not affect others):

**TARGET SPOT** - Parked with its drive wheels or treads touching the round target.

Value: 25 points.

### YELLOW BRIDGE DECK -

Parked with its drive wheels or treads touching your yellow bridge decking, but not touching any red decking or the mat.

Value: 20 points.

**VEHICLE SHARING** - Parked with its drive wheels or treads touching your red bridge decking, but not touching the mat.

Value: 25 points.

### GAIN ACCESS TO THINGS...

#### ACCESS MARKERS -

Access markers need to be in their "down" position.

Value: 25 points each.



#### LOOPS -

Loops need to be in Base.

Value: 10 points each.



*BONUS: New technologies can sometimes eliminate your need to travel. They are hard to develop, but each new one makes the next come easier... If all three gray loops have reached Base, you may take one red loop into Base by hand. Independent from that, if all three red loops have reached Base, you may take one loop of any color into Base by hand.*

## THE FOUR CATEGORIES OF FLL COMPETITION

**ROBOT PERFORMANCE (Robot Matches)**- Each team is given three opportunities to perform on the official playing field which is officiated by FLL referees. Two teams play simultaneously at the double table, located in the Competition Area. Rounds last 2 1/2 minutes as teams try to complete as many of the Robot Missions as possible. Teams will have the opportunity to make robot and program modifications in "The Pit" between rounds. Scores are not cumulative; The highest score for each team will be counted towards the Robot Performance Award. One practice round in the morning will not be scored.

**RESEARCH PRESENTATION** - FLL teams are given an annual challenge that asks them to identify an existing problem related to the climate in their area and find an innovative solution to that problem. Teams prepare a 5 minute creative presentation to share their work and perform for a panel of judges at the tournament. Their performance is followed by a brief Q&A session with the judges. Teams are assessed on how well they demonstrate their solution and the research behind it.

**TEAMWORK INTERVIEW** - Teamwork is judged on a team's ability to show partnership, respect for their teammates and persistence while tackling a challenge. Teams will be presented with a task which they then have 5 minutes to accomplish. This will be followed by a 5 minute Q&A session about the strategies they used (then and throughout the season) to work together to achieve a common goal.

**TECHNICAL JUDGING** - Teams demonstrate their understanding of robot design and programming in an interview format. Questions asked cover both the tournament day and the entire season.

**\*\*NOTE FOR SPECTATORS: Judging Sessions (Research, Teamwork & Technical) are NOT open to the public.**

### What is 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. FIRST is a 501(c)3 not-for-profit public charity, and is supported by a strong network of sponsors and volunteers.

FIRST provides the FIRST Robotics Competition and the FIRST Tech Challenge for high-school students, the FIRST LEGO League for 9 to 14 year-olds, and the Junior FIRST LEGO League for ages 6 to 9.

#### Official FIRST Events in Alaska:

- Nov 21, 2009 - Juneau Robot Jamboree
- Dec 4-5, 2009 - Southwest Regional Tournament (Bethel)
- Dec 5, 2009 - Tanana Valley Robot Rally (Fairbanks)
- Jan 16, 2010 - Anchorage Robot Rendezvous
- Feb 19-20, 2010 - FIRST TECH Challenge Statewide Championship (High School level) (Fairbanks)

### Stay informed @ [fllalaska.com](http://fllalaska.com)!

See photos and results from today's tournament!

Link to other activities sponsored by the SpringBoard Education Program including summer camps, professional developments and more.

#### FLL Alaska Contact:

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### Get ready for next year! 2010 CHALLENGE



Can FIRST® LEGO® League Teams improve our quality of life? Through the 2010 Body Forward Challenge, 9 to 14 year olds will explore the cutting-edge world of Biomedical Engineering to discover innovative ways to repair injuries, overcome genetic predisposition, and maximize the body's potential, with the intended purpose of leading happier and healthier lives.



## THANK YOU TO ALL OUR VOLUNTEERS!

"Volunteers are not servants. Volunteers are partners working together for improving America's future."

- Mayor Richard Daly

