

# National STEM League

## Track to the National Finals

Charlotte Motor Speedway \* May 2012

### Web Competition

*Via web presentations & file/media sharing*

**Points Race:** Teams earn points by uploading investigations, projects, lessons and other work like web development, graphic design and project planning. Points Race Leaders make up half the teams invited to the National Finals.

**Project Submissions:** Teams can submit projects and make web presentations in any project category. Winning projects will be represented at the National Finals.

*Winners make up 1/2 the field*

*Participate via web if travel restricted*

*Projects featured for public viewing*

### Regional Finals

*Hosted at local tracks or partner venues*

Ten80 Regions are located around the U.S. In these regions, Ten80 and partners host a Regional Finals in April. Winners are invited to the National Finals.

*Winners make up 1/2 the field*

### National Finals

*2 days of intense competition and collaboration*

Opening Banquet

Race Events

Wind Tunnel Testing

Endurance Race with "Green" Cars

Team Presentations

Project Presentations

Graphic Design Show

Grants & Prizes

Scholarships

Experience & Pride



# Web Competition & Support

## September - April, 2012



 **STEM Initiative**

Between September and May each year, student teams can enter the virtual competition by sharing your work and making live presentations via the internet & DLN's\*.

Points Race Winners are invited to the national finals. Projects from Category Winners are showcased at the finals and Ten80 web sites.

### Three ways and reasons to participate

1. *Points Race: Sept - May*

Your team can maximize points by competing in as many categories as possible, as often as possible (how often varies by category). Points winners are invited to the National Finals held at Charlotte Motor Speedway in May 2012.

2. *Project Submissions: Dec and April*

Your team can submit projects even if you aren't trying to win the points race. Winning projects are displayed at the National Finals and showcased on Ten80's web site for the following year.

3. *Remote STEM Mentoring*

You can request Ten80 provide feedback on your work.

### Important Dates

1. Points Race Begins September 1<sup>st</sup> and winners are announced April 30<sup>th</sup>.
2. Project Submissions are due on December 31<sup>st</sup> and April 30<sup>th</sup>.

### Competition & Project Categories

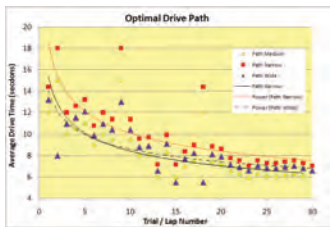
- Race Events & Monthly Challenges
- Chassis Setup
- Aerodynamic Design
- Mechanical Design
- P.I.T. Now (Alternative Energy)
- Business & Project Planning
- Public Relations & Media
- Team Presentation
- Web & Networking Sites
- Graphic Design (Team ID & Car Paint-Out)

\* DLN is Distance Learning Network. For example, some remote presentations and events will take place over NASA's DLN.

# Points Race Categories



Between Sept. 1, 2011 and April 30, 2012, student teams earn points through activities representing a broad range of industry skills. Details are in the *STEM League Handbook, Points System*.



- Race Events & Monthly Challenge**
- Face-2-Face Events (varies, ~300 each)
  - Web Races (varies, ~300 each)
  - Monthly Challenges (varies, ~200 each)

- Race Engineering**
- Chassis Setup Investigations (100 ea.)
  - SolidWorks Designs (100 ea.)
  - Aerodynamics Projects (200-400 ea.)
  - Creative Engineering Proj. (200-400 ea.)
  - P.I.T. Now Alt. Energy Proj. (200-400 ea.)
  - Math, Science Lessons (100 ea.)

- Business & Project Planning**
- Team Business Plan (400-500 ea.)
  - Team Project Plan (200-400 ea.)
  - Sub-Team Project Plans (100-200 ea.)
- ex. Plans for Aerodynamic, Creative Engineering, etc.*

- Media Professional & Non-Professional**
- Print & Web Articles (10/20 per 100 words)
  - Video Reports (100/50 per 30 seconds)
  - Audio Reports (100/50 per 30 seconds)
  - Professional Reprints (10 per 100 words)
  - Blog Mentions (30/15 per entry)
  - Published Pictures (30/15 per iteration)

- Web Sites & Networking Sites**
- Web Site Design (200-400)
  - Networking Sites (1 point / follower)
  - Web Links from other sites (40 / link)

- Graphic Design & Public Relations**
- Team Identity Design (200-400)
  - PR Materials (50-200 per item)
  - PR Strategy & Plan (100 - 200)

**Car Decal Design (100 - 200 points)**

Task Name	10/22	11/5	11/19	12/0	12/1
<b>Team Manager</b>					
Form Team & Recruit	Met				
Assign Primary Roles	Met				
Set Team Goals & Commitments	Team Manager				
Customize Team Schedule	Team Manager				
Drive Progress Toward Goals					
<b>Chief Financial Officer</b>					
Review Team Goals	CFO				
Review Team Resources	CFO				
"Ballpark" Financial Needs	CFO				
Set Financial Goals	CFO				
Plan Fundraising & Sponsorship Campaign					CFO
Drive Fundraising and Sponsorship Drives					
<b>PR Crew: Math &amp; Physics Experts</b>					
Hitting Your Mark	PR Crew: Math & Physics Experts				
First Things First	PR Crew: Math & Physics Experts				
Traction	PR Crew: Math & Physics Experts				

**FEATURE STORY**

**LEARNING MADE FUN**  
MOTORSPORTS INSTITUTE SUMMER CAMP

"I've been interested in motorsports since I attended my first NASCAR race two years ago. My Mom was always a fan, and I never understood. Now I do. I'd love to have a career in it. I'd love to be in marketing and publicity supporting a really great driver."

Gabriel Lopez, Motorsports Institute Summer Camp

**FAST TRACK RC LIONS**

-Fast Track RC Lions-

Competitions Team Members RC Cars Pictures

METSA RL Turner



# Ten80 Student Racing Challenge: NASCAR STEM Initiative™

## Regional & National Finals in May 2012



**Who Competes:** Regional & Points Race winners are invited to the National Finals. Download the event guide with full details at the team web site (<http://mindbugs.mrooms.net>).

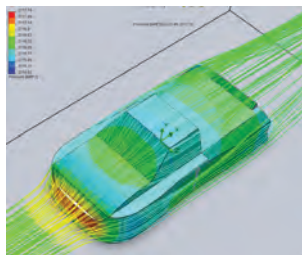
**Venue:** 2012 National Finals is hosted by Charlotte Motor Speedway in Concord, NC.

**Challenges:** In one fast-paced day, student teams compete in at least 6 of the 8 competition categories shown here.

### 1. Race Events (200 points)



### 2. Aerodynamics Project (100 points)



### 3. PIT Now! Alternative Energy Project (200 points)



### 4. Visual Design (200 points)



### 5. Mechanical Design Project (200 points)



### 6. Team Presentation (200 points)



### 7. PIT Now! Endurance Race Position determined by Sustainability Index (200 points)



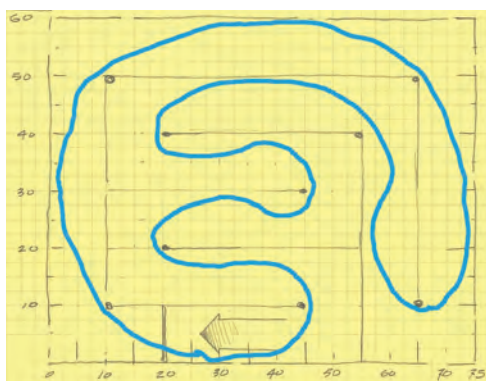
### 8. PIT Crew Challenge (100 points)



## General Floorplan

Team Pit Areas surround the tracks and include a table, chairs and electricity drop.

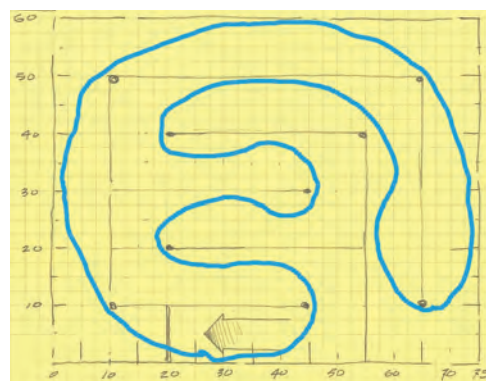
Track 1 (75 x 55 ft)



Team Logo Display \* Media Presentations

**Driver Platform**

Track 2 (75 x 55 ft)



Car Show: Decal Design Display

Project Display Area:  
P.I.T. Now \* Mechanical Design.

**Driver Platform**

Team Presentations in a separate, private room