

Ten80 Education National STEM League F2F Regional Event



**Saturday February 28th
noon to 4pm est
6701 Bock Rd.
Fort Washington Md. 20744**



Race Events

10 minute challenge track #10

Drag Race

Oval Track 45 Minutes (75 x 55)

3 minute presentation

D-D-D presentation required

**Must be submitted to
Ten80 NLT 13 Feb**



**Metro Warriors STEM Alphas
Fast & Furious**

Randy McCain

202-670-4179

rmccain@mwso.org

Registration required at [www.](http://www.mwso.org)

mwso.org

NLT February 20th

Indoor GYM slippery rubber



1080 Education Inc. (Ten80) Participation Agreement

To participate in the **SOUTHERN CALIFORNIA SPRING RACING SERIES**, every participant including teachers, students, parents, chaperones and guests must complete and **BRING THIS SIGNED AGREEMENT TO THE EVENT**.

Participating School/Org:			
Participant Name:		On-Site Chaperone	
Participant Age:		Relation to Participant	☐ Self ☐ Parent-Guardian
Parent / Guardian Name:			
Home Address:			
Emergency Daytime Phone		Home Phone	
Email:			

WAIVER AND RELEASE OF LIABILITY. In consideration of being permitted to participate in the **SOUTHERN CALIFORNIA SPRING RACING SERIES** and related activities during the Spring 2015 Racing Season Events at **Western Center Academy** building at **2345 Searl Parkway, Hemet CA 92543** (the "Event"), _____ ("Participant") or Participant's parent or guardian agrees to the following on behalf of him or herself and heirs, successors and assigns.

I confirm that I have legal authority (a) over myself as a Participant having reached the legal age of 18, or (b) as a parent of or guardian for the Participant. I request that I / my child be permitted to participate in the Event. I, the Participant or Parent/Guardian of Participant agree that the Participant will follow all instructions of Event organizers and to assume all risks associated with a failure to follow instructions. The Participant will inspect the Event site, all related facilities, and all equipment and advise Event personnel of any unsafe conditions.

I, the Participant or Parent/Guardian of Participant, agree to release and discharge 1080 Education Inc. ("Sponsor"), Ten80 Foundation ("Sponsor"), U.S. Army ("Sponsor"), Western Center Academy and Hemet Unified School District ("Sponsor"), vendors and exhibitors and their respective affiliates, directors, employees, contractors, representatives and agents ("Released Parties") from any and all injuries (fatal or non-fatal), losses, causes of action, liabilities, damages, expenses or claims (collectively, "Claims"), whether foreseeable or not, that might arise from the negligence of the Released Parties in connection with the Event or the condition of the property, facilities or equipment used for the Event, regardless of when such Claim may arise. I agree to indemnify, defend and hold harmless the Released Parties from and against any and all Claims arising from my/the Participant's acts or omissions in connection with the Event.

I, the Participant or Parent/Guardian of the Participant, understand the Event may include hazardous activities including but not limited to riding in a car, bus or van at highway speeds and that this type of activity can be dangerous and can, and sometimes does, result in serious, permanent bodily injury (fatal or non-fatal). I also understand that my/the Participant's participation in the Event may involve risks that may or may not be foreseeable and may expose me/the Participant to the possibility of injury as well as damage to personal property. I acknowledge that such hazards may result from my/the Participant's own acts or omissions or those of others, the rules of play or the condition of the premises or equipment. I knowingly assume all risks associated with participation in the Event regardless of how such property damage, injury or death might arise. I understand that it is my responsibility to obtain any insurance needed to cover personal injury, death, property damage or any Claims arising from my/the Participant's participation in the Event.

VIDEO/PHOTO RELEASE I, the Participant or Parent/Guardian of the Participant, hereby grants Sponsors the right to use the Participant's name, likeness, voice, biographical information and any other indicia of his/her identity in connection with the Event, and publicity, advertising and promotion for the Event and future editions of the Event in all forms of media throughout the world in perpetuity without compensation. I waive any right that I, the Participant or Parent/Guardian of the Participant, may have to inspect or approve any materials that may use such rights in connection with the Event and any and all future uses. I acknowledge that Sponsors shall co-own with each other all rights to photos, video imagery, sounds or other recordings made in connection with the Event and any and all future uses.

MEDICAL AUTHORIZATION: I, the Participant or Parent/Guardian of the Participant, warrant that Participant has no physical condition which would interfere with the Participant's ability to participate in or attend the Event or would endanger the Participant's health or any other participant's health. Should the Participant need to have medical treatment while participating in this event, I hereby give the Event Sponsors personnel permission to use their judgment in obtaining medical service for the Participant and I give permission to the physician selected by Sponsor(s) personnel to render medical treatment deemed necessary and appropriate by the physician. I understand that the Sponsors have no insurance covering such medical or hospital costs incurred for the Participant and, therefore, any costs incurred for such treatment shall be my sole responsibility.

This waiver and release will be construed broadly to provide a release and waiver to the maximum extent permissible under applicable law. This waiver and release shall be construed and interpreted in accordance with the laws of the Commonwealth of Massachusetts, excluding laws regarding conflicts of laws. Any provisions found to be void or unenforceable shall be modified or deleted to the minimum extent necessary to make them enforceable, and shall not affect the enforceability of any other provisions.

I have read this Waiver and Release of Liability, I fully understand its terms, and I recognize that I have given up rights by signing it in consideration of being permitted to participate in the event. I sign it voluntarily and without any inducement OR DURESS.

Signature:

Date:

Ten80 Education National STEM League Regional Event

SEE 2014-15 RULES & GUIDELINES for FULL List. This is a summary.

- Clear Windshield: The car body you use during races (not the one you submit for decal design) must have clear windows for the transponder to work properly. If you fail to follow this rule, you will have to punch holes in the body in order to install the transponder.
- Radio: Cars with RF chips are not allowed. Only cars using 2.4 GHz radios can compete.
Car: HPI Sprint 2 or Redcat spec car purchased through Ten80 Education. For HPI drivers, the serial number must be registered and match those provided to you by Ten80. You can change anything on the car if it is not prohibited below but must be able to show proof (pictures, etc.) that the base car you're using is the car with the serial number provided to you by Ten80. If the final car looks drastically different than the original car, be prepared to show a journal documenting the path from stock to your current car.
- Scale: All cars used in Race Events should be no larger than 1:9th scale. Stock cars provided through Ten80 Education are 1:10 scale.
- Motor: motor with 15 or more turns only; ONLY ONE MOTOR PER CAR
- (Does not apply to Robo RaCeCar event) Controller: Stock programmable controllers are not allowed. You can modify a non-programmable controller but you must prove, on site through documentation, that you did the work yourself. If there is a question about the type of controller, you must prove it cost no more than \$80 to purchase.
- Battery: NiCd or NiMH; No Li-ion
 - Voltage: 8.4 V or less for single pre-packaged battery packs; you can build your own from individual cells
 - Capacity: 4200 mAh for single, pre-packaged battery packs; you can build your own from individual cells
- Tires: Any commercially available tires and traction compound are allowed
- Gears: Any commercially available gears are allowed
- Car Body: Any commercially or team made body including wings is allowed; front window must be clear
- Springs / Shocks: Any commercially available springs and shocks are allowed
- Chassis: Chassis can be modified but wheel base, and track width, must be 1:9 scale or smaller (stock is 1:10 scale)

Randy McCain
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Register at www.mwso.org

NLT February 21st



Ten80 Education National STEM League Regional Event



Updated Oct. 6, 2014

General Race Rules

Inspections (Pre-Race, Post-Race and Random)

All permitted and prohibited modifications are described in the **NSL 2014-15 Rules & Guidelines**. Be prepared to share your documentation on modifications with judges to prove your processes are legal.

During event registration, take all team cars, controllers and batteries to Inspection. If transponders are being used, one will be installed on your racecar at this time.

If your car is in violation, if possible, a spec' part will be provided to you and you are required to install and use that part. If this is required, you will be penalized by adding 5 seconds to your drive times in each race event and must pay retail value for the part before leaving the venue.

The sanctioning body may inspect team cars at any time, including after all events are completed.

Measuring Time

There is only one transponder per team. It is up to each team to ensure the transponder is installed on the car used in an upcoming race.

Penalties

Penalties are applied if a car has fewer than 2 wheels on the drive lane (keep 2 wheels in the lane at all times), if a team interferes with other cars on track or if a car is obviously crashing others. If a penalty is applied, the car is sidelined for 2 - 45 seconds depending on the race. Once a race is complete, no complaints can be lodged (don't waste the time of your Sanctioning Official trying it).

Clearing Cars

If a car flips over, moves lanes or otherwise interrupts racing, a team-mate is required to repair the track and get the team car going again WITHOUT interfering with other cars on track. If a team interferes, purposefully or not, the team car is assigned an extended penalty of 30 seconds. It is good practice to assist teams with overturned cars.

Multiple Drivers

Multiple drivers are allowed but hand-offs of the receiver can only occur in the designated space. This makes sense in some races more than others (it is up to you to figure out which ones).

Multiple Cars

A single team may have multiple cars. All cars used in races must pass inspection and have a working transponder installed if using them.

Once a race starts, cars cannot be exchanged. We'll say it again! Once a race begins, if a car fails to operate, the team is awarded a "DNF" = Did Not Finish. If a race is repeated (ex. something was wrong with it), the same team car must be used unless its failure can be proven to be the fault of another team during the first run.

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Ten80 Student Racing Challenge 2014-15 Competition Categories



NATIONAL STEM LEAGUE

RACING
CHALLENGE

See the Event Guide for information on venue, agenda, track layout and scoring.

Due to scheduling and venue restrictions, some competition categories may not be included at every Invitational. See event guide for details.

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Ten80 Student Racing Challenge 2014-15

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Thanks to the U.S. Army for sponsorship of youth and STEM education.



ARMY STRONG.®

Contact our team of Engineer-Educators with questions.

www.StudentRacingChallenge.com

support@ten80education.com

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Updated Oct. 6, 2014

Head-to-Head Events

See the 2014-15 Rules & Guidelines for a full list of race options.

Goal

Head-to-Head Race Events include road course races, oval races, drag racing, automated racing and wind tunnel testing. The obvious goal is to finish first on the races and engineer the best body in the Aerodynamic testing. There is however a larger goal. Like basic drawing, problem solving is more natural to some than others, but it is a skill that EVERYONE can learn. The purpose of race engineering is to field a car that goes fast and handles well; however, the lessons learned in doing that will prepare you to solve problems of all kinds.

Possible Points

Head-to-Head Sub-Category	Description	Racing Ch. Web Points Race	Face-2-Face Points
Roadcourse Races	A roadcourse has both left and right turns. There may be multiple roadcourse races at an event, including the following: • Qualifier: Teams have 3 - 10 minutes on track to get their single best time • 20 Minutes: Teams race head-to-head to get the most laps over a defined time.	200 per event = 400	400
Oval Superspeedway Race	Drive 20 minutes to get the maximum number of laps on an oval course.	400	200
MODS! Robotics Races	• Modify to drive autonomously. See the curriculum and event guides for details.	• 100 for placement based on video submission or Sanctioned Events • 100 for automating both steering and throttle	MODS! You will earn points for only one category though you can enter both and drop the lower score. • ROBO: 100 for placement + 100 for automating both steering and throttle • DRAG: 100 for placement + 100 for proven modifications for drag racing
MODS! Drag Racing	• Drag Racing Prep: Modify your car for drag racing • Placement at Sanctioned Points Events	• 100 for proven modifications for drag racing • 100 for placing at Sanctioned Events	

Placement Points

"Placement Points" mean that teams earn the following points based on their finish of 1st, 2nd, 3rd, etc.

Event Place	Event Points
1st Place	100
2nd Place	80
3rd	60
4th	50
5th	40
Finis	30
Participate	20

If possible points for an event is 200 points, the values in this table are multiplied by two.

Ten80 Education National STEM League Regional Event



Updated Oct. 6, 2014

Road Course Races –

Road courses include both left and right turns. Road course events showcase team's race engineering skills, tests team's strategies and pits drivers against one another in head-to-head races and time trials. Teams with an optimal car set up, well thought out strategies and top driving will win these events. Some road course races are designed for teams to show how fast their car can go. Others require more strategy and teamwork.

Go Fast! Best Single Lap Time

Teams have 5 minutes on track to log the single best lap time. Teams can stop and make adjustments or trade drivers, using the 5 minutes on track however they choose. Multiple cars will be on track at a time.

- Score = Best Lap Time
- Winner = Lowest score (lowest lap time)
- Penalty = lap DNF (DNF = Did Not Finish)

20-Minute Race

These timed races showcase a driver's consistency over time and energy management. Depending on the race time, energy strategy may be a factor (when to change batteries, how fast to accelerate, etc.).

In timed races, teams drive 20 minutes and try to complete the most laps over that time. Multiple cars will be on track at a time. The partial final lap does not count.

If a team's battery dies mid-lap then they are done and are awarded a DNF = Did Not Finish.

- Score = Total completed laps
- Winner = Highest score (most laps)
- Penalty = 30 sec. for 20-30 min. races

Modify for Stopwatches: Assign fewer cars per track so lap counters (people) can keep an eye on their assigned car. Two to three people count the number of completed laps for each car, marking a tick on paper for each completed lap so memory failures do not mess up a race.

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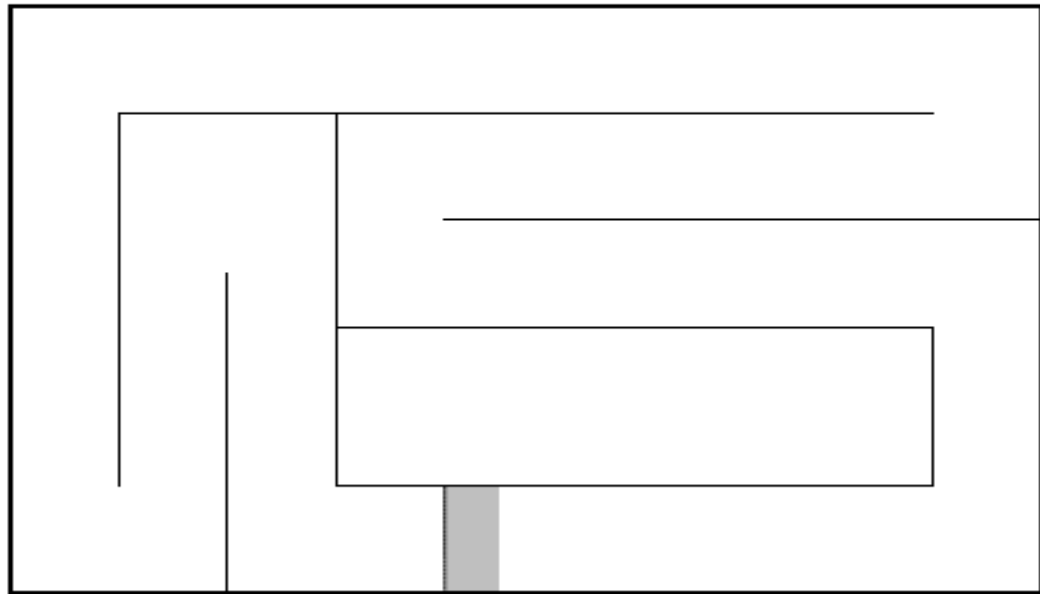
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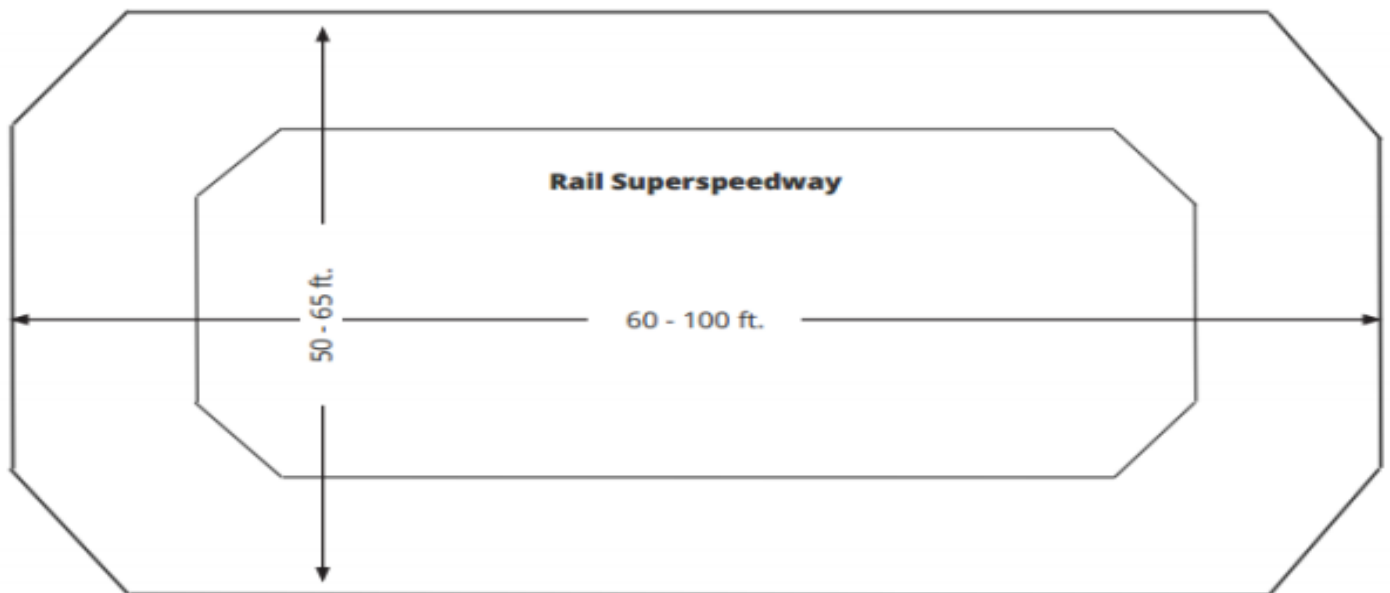
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Road Course Layout & Surface

Road Course Dimensions: 55ft x 75ft
Track Surface: Concrete



Oval Superspeedway Layout & Surface



Track Surface: Concrete

Ten80 Education National STEM League Regional Event



CHALLENGE

Updated Oct. 6, 2014

Superspeedway Endurance Race

Overview

The oval superspeedway track is a great layout for endurance races; allowing teams to concentrate on strategy with fewer crashes as fatigue sets in. Aerodynamics is a bigger factor on this course than on road courses.

The endurance race showcases your team's race engineering skills, strategies, and driving & concentration skills. It pushes limits of concentration and mechanical, electrical components. It is very possible that you overheat and ruin electronics if not careful. Teams with an optimal car set up, well thought out strategies and top driving will win these events.

Teams can crash and burn literally and figuratively without a plan for this long race. Teams may need to sacrifice some laps in order to cool the car motor and cycle batteries. Some will choose to drive hard and take breaks while others will drive slower than top possible speeds. Unprepared teams will just max out and hope for the best (not recommended). Some teams will install hydrogen fuel cells to extend time between battery changes.

How to Race

All cars line up in a staggered position behind the transponder bridge or start-finish line. Placement of cars is determined by the Sanctioned Official (SO). Upon the start signal, teams begin to drive and do not stop until the race is over or they choose to make a pit stop.

- Score = Total completed laps
- Winner = Highest score (most laps)
- Multiple car drivers are allowed but hand-offs of the receiver can only occur in the designated space.
- Penalty = 30 sec.
- Pit stops are allowed (1 Mandatory Pit Stop must take place with a battery change)
- If a team's battery dies mid-lap then they are done and are awarded a DNF = Did Not Finish. The partial final lap does not count. The team is responsible for removing the car and they are NOT allowed to restart. Their final score is the number of completed laps before the car died.



Ten80 Education National STEM League Regional Event

Modifications – Drag Racing

Drag Racing or Robo RaceCar

Teams earn points for only one of the two "Modifications!" options, drag racing or Robo RaCeCar racing. Teams can enter into both and drop the lowest but cannot earn full points for both.

Overview

The optimal car design for drag racing is completely different than for road course or oval racing. Teams may consider using a 'replacement car' because it can be difficult to use the same car for both types of races. The curriculum doesn't specifically address the re-engineering of a car. Apply the lessons learned from stock car racing to this straight-line format.

Score = Placement + Bonus

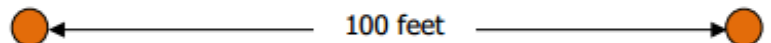
Teams earn up to 100 points for first place in the drag race based on the usual race placement points.

Teams can earn another 100 points by submitting documentation on how the car was modified for drag racing. Judges will award points using the **logbook rubric**.

How to Compete

Two or more lanes are setup side by side, each is the same length and width. Cars are set with the front wheels behind the start line. Once track operator says 'Go', teams drive from start to finish as fast as possible. If a car moves before 'start' is called, it is disqualified. One 'referee' will be placed at the start line and another at the finish line to look for penalties and determine the first to cross the finish line. A camera will be placed at the start and finish lines for review.

Track Layout & Surface



Ten80 Education National STEM League Regional Event

Modifications – Robo RaCeCar

Drag Racing or Robo RaceCar

Teams earn points for only one of the two "Modifications!" options, drag racing or Robo RaCeCar racing. Teams can enter into both and drop the lowest but cannot earn full points for both.

Goal

Turn your radio controlled (RC) car into a robot that is programmed to automatically drive an oval, walled track with the longest dimension = 15 feet as fast as possible with as few crashes as possible. How you automate the car is totally up to you. There is one way outlined by Ten80's team in the curriculum.

Scoring = Placement + Bonus

Teams earn up to 100 Placement Points based on the following score over 5 minutes on track:

Score = (# of Laps) - (# of Bumps into the Wall)

Teams can earn up to 100 bonus points for automating both the steering and speed. You can enter the event by automating only the steering OR speed but do not earn the bonus.

1. Automate BOTH the steering and speed. Once the timer is begun, you do not touch the controls.
Bonus points = 100.
2. Automate ONLY the steering. You control the speed via throttle trigger but do not touch the steering control.
Bonus points = 0.
3. Automate ONLY the speed. You control the steering via steering wheel but do not touch the throttle trigger.
Bonus points = 0.

How to Compete (Procedure)

Sign up for a testing time. At that time, your car will be placed in the track and the timer begun. A judge will count the number of laps and the number of wall bumps over 5 minutes.

Track Layout & Surface

Track surface Concrete. It will have solid walls of corrugated plastic or similar opaque materials. It will be a circular shape made of straight segments, each approximately 10 feet long as shown in the image to the right. Diameter is 10 feet.



Ten80 Education National STEM League Regional Event

Updated Oct. 6, 2014

Data-Driven Design Project – Evaluation Rubric

The "OVERALL" criteria (#9 and 10) is weighted as 2x so it is worth 40 points.

Total points from the rubric are multiplied by 4 or 5 to give 800 and 1,000 points respectively.

Criteria	Novice 0 point	Apprentice 10 point	Practitioner 15 point	Expert 20 points
1 Goals, Purpose	The purpose of this project and what teams stand to gain from it isn't clear at all.	A short explanation is given but the potential gain from isn't clearly conveyed.	A thorough description is given about why the team is implementing this project.	...and its purpose is clearly beneficial to the team and potentially the league.
2 Creativity (a bit subjective...)	Project is obvious to most observers	Project is obvious to those skilled in the art	Project idea is not obvious to those skilled in the art	and the idea seems to be a good one.
3 Actual Implementation (Viability) for NSL Teams	Ideas only are given with no detail on how it would actually be implemented for a team or the league.	A simple description of how the project would be implemented is given but there are unanswered questions; did not consider relevant obstacles.	A description of how the project would be implemented is given with some data to back it up; however, the audience isn't convinced it is viable.	A thorough description of how the project would be implemented is given with real, accurate data to back it up. The audience is convinced it is viable.
4 Economic Impact	There is no discussion of the economic impact of the implementation.	Impact is reported, but references to data are infrequent, inaccurate or inappropriate	Impact is clearly reported and supported by data that was collected, evaluated and presented clearly.	...And the impact is significant.
5 Performance Impact	- There is no discussion of the actual impact on performance; - Performance is not defined	Impact is reported but data references are infrequent, inaccurate or inappropriate; performance not clearly defined	Impact is clearly reported and supported by data that was collected, evaluated and presented clearly.	...And the impact is significant.
6 Data Organization	- Data are inaccurate - Data are haphazardly recorded - Data tables missing	- Most data are collected but checks are not placed on measurement to insure accuracy - Data recorded in a way that threatens reliability - Data tables incomplete or contain inconsistencies	- All significant data measured with some checks placed on measurement for accuracy - Data recorded effectively - The data tables are relevant to the project requirements	- All significant data measured, checks are placed on measurements for accuracy - Data recorded effectively and efficiently - The data tables well designed to the project
7 Procedure & Documentation	Purpose, materials and procedures are not documented for all or most investigations. Reader cannot follow what was done.	Purpose, materials and procedures are documented before most but not all investigations. Reader has to infer what was done.	Purpose, materials and procedures are documented before each investigation but not completely clear. Reader has to infer some of what was done	Purpose, materials and procedures are neatly documented before each investigation or analysis. Reader does not have to infer what was done.
8 Verbal Presentation Video (Web) or Judges Interview (F2F)	Presentation is disorganized and does not discuss content requirements. Articulation is unclear. Presenters do not speak directly to audience.	Presentation is organized but doesn't discuss all content accurately. Eye contact pretty good; articulation is pretty clear	Presentation is organized and creative and addresses procedures and data accurately. Articulation is clear and eye contact good.	 Also presents a compelling argument with data to support the process, conclusions and recommendations.
9 and 10 Overall	Purpose is not met or is not supported by actual outcomes of activity	Purpose is met but not supported by actual outcomes and data	Purpose is met and seems to be supported by actual outcomes	The activity was successful in meeting its purpose and is supported by actual outcomes and data

Ten80 Education National STEM League

Enterprise Events

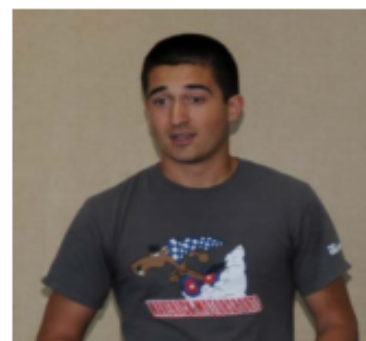
This category includes the all-important (and required) team presentation, graphic design and bonus elevator speech categories.



8. Team Presentation



9. Graphic Design



Bonus. Elevator Speech

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Team Presentations

Overview

Through the 8-minute team presentation you'll showcase your communication skills by conveying to the judges what your team has been doing and how you did it. You can provide support materials like handouts, business plan, cards, etc. You're expected to support your presentation with visual media like slides, video clips, etc.

How to Compete (Procedure)

Load electronic files onto the presentation computer during registration before competitions begin. Test the files to ensure they work. You have a very limited time in the presentation area so should take care that you do not waste any time messing with the multimedia part of your presentation.

At the scheduled time, your team will go to the designated area and give an 8 minute presentation. Judges will have your electronic files queued up on the computer. You can navigate the computer or be prepared to tell judges how to navigate. Just remember, you have only 10 minutes in the room total (1 min to get in. 8 minute presentation. 1 min for Q&A. 1 min to get out).

Scoring

Teams earn up to 800 points based on the evaluation rubric.

Presentation Format

- Duration: 10 minutes in the presentation room to give an 8 minute presentation; do not go over time and target to finish as close to 8 minutes as possible.
- Electronic Files: Files must be in one of the following common formats:
 - PowerPoint
 - Adobe Acrobat Reader (PDF)
 - Adobe Flash or Java Applets
 - Common image files (JPG, BMP, TIF, etc.)
 - Common movie files (mp4, wmv, mp3, mov, etc.)
- Internet Access: Assume you DO NOT have any. Bring all files you need on the thumb drive.
- Presentation Equipment: There will be a WINDOWS computer, projector and speakers for your use.
- Mac vs. Windows: The presentation computer is a WINDOWS computer so ensure that all files you provide will work for that format. If you want to use your own MAC computer, iPad or similar you'll have to take up some of your 10 minutes to switch over. Bring ALL required connectors to the projector that accepts VGA or HDMI.
- Paper Handouts: If you choose to handout materials to the judges, provide 3 copies.

Required Presentation Content

The main story you tell is up to you. You can present it as a marketing presentation to potential sponsors or as a summary report to current sponsors showing them the return on investment (ROI) in your team was high. See the 2014-15 Rules & Guidelines for expected content.



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Team Presentation Evaluation Rubric:

Total points from the rubric are multiplied by 2 to give the 0 - 400 category points.

Criteria	Novice 0 point	Apprentice 10 point	Practitioner 15 point	Expert 20 points
1 Audience Response & Eye-Contact	- Incoherent; audience lost interest. - Reads all or most of report with no eye contact.	- Some related facts but went off topic and lost the audience. - Some eye contact but not - Maintained and at least half the time; reads most of report.	- Presented facts with some interesting "twists"; held the audience attention most of the time. - Mostly maintains eye contact but frequently returns to notes.	- Involved the audience in the presentation; held the audience's attention throughout. - Maintains eye contact; seldom returning to notes; like a planned conversation.
2 Organization & Logic	- Poor organization. - Does not clearly introduce the purpose - Choppy and disjointed because there is no apparent logical order of presentation - Ends without a summary or conclusion	- Somewhat organized. - Introduces the purpose - Jumps around topics. - Several points are confusing - Ends with a summary or conclusion that seems disconnected to content	- Generally well organized - Introduces the purpose clearly. - Most information is in logical sequence; A few minor points may be confusing - Ends with a summary of main points	- Extremely well organized - Introduces the purpose clearly and creatively - Presents information in logical, interesting sequence which audience can follow - Ends with a strong conclusion
3 Creativity	Bland, predictable, and lacked "zip. Repetitive with little or no variety; little creative energy used	Little or no variation; a few original touches but for mainly presented with little originality or interpretation	- Some originality apparent; - Clever at times; good variety and blending of materials/media	Uses the unexpected to full advantage; very original, clever, and creative approach that captures audience's attention
4 Use of Com- munication Aides	- Uses superfluous graphics, no graphics, or graphics that are so poorly prepared that they detract from the presentation - Font is too small to be easily seen	- Occasional use of graphics that rarely support presentation content; visual aids were not colorful or clear, choppy, time wasting use of multimedia - Font is too small to be easily seen	Graphics aid thesis but media should be more varied and connected to presentation content. Font size is appropriate for reading	- Graphics reinforce content and aid maximize audience understanding; use of media is varied and not added simply for the sake of use - Visuals were colorful and large enough to be seen by all
5 Content: Team Or- ganization, Funding	Little of these topics were covered. Audience had little feel for the team's organization and funding.	Not all content was covered or was covered so that audience had a grasp of team's organization and funding	For the most part, the content was covered.	Speakers give a good picture of the team's organization and funding.
6 Content: Engineering & Projects	Little of these topics were covered. Audience had little feel for the team's technical investigations and projects.	Not all content was covered or was covered so that audience had a grasp of team's technical investigations and projects.	For the most part, the content was covered.	Speakers give a good picture of the team's technical investigations and projects..
7 Content: Motivation, Goals, Future Plans	Little of these topics were covered. Audience had little feel for the team's motivation, goals and future plans.	Not all content was covered or was covered so that audience had a grasp of team's motivation, goals and future plans..	For the most part, the content was covered.	Speakers give a good picture of the team's motivation, goals and future plans.
8 Duration	- Less than 6 minutes - OR - More than 9 minutes	- Between 6 and 7 minutes - OR - Between 8 and 9 minutes	- Between 7 and 7.5 minutes - OR - Between 8 and 8.5 minutes	Between 7.5 and 8 minutes
9 Compelling	You aren't compelled to invest your time or resources in this team.	You would like to invest your time or resources in this team....but don't really think it would happen.	You would invest your time or resources in this team.	You would invest your time or resources in this team and ask that others do the same.
10 Technology	Team did not prepare electronic materials as required and therefore could not use them	Team did not prepare electronic materials as required but were able to get them ready to use in time	Team had some difficulty preparing electronic materials or helping judges navigate them	Team submitted materials that were easily loaded and navigated

Ten80 Education National STEM League Regional Event

Event: Graphic Design

Half of the points come from car body decals and half from team identity. The team identity is more than just a logo ideally. To earn full points, evaluate the criterion completely.

Teams can earn up to 400 points (200 car body + 200 team identity).

Car Body Decal

Goal & Overview

To design a Racecar or Rover body for visual appeal and to showcase team and league sponsors.

How to Compete (Procedure)

During registration, submit either your car body or pictures from every angle to the Sanctioning Body

REQUIRED LOGOS

Full points can only be awarded if the following logos of your national sponsors are missing. As Matt Dorton of Hendrick Motorsports says, "The key is showing your sponsors as prominently as possible, as cleanly as possible". Download logos under the marketing section at the TEN80 team web site (Car_Decal_Logos.zip).

- Ten80 Education
- U.S. Army
- Student Racing Challenge Program Logo
- Your local & team sponsors

Preparation

See the *Car Decal Design* project in the *Enterprise* guide.

Scoring

Teams can earn up to 200 points based on the following evaluation criteria.

1. SPONSOR MARKETING (0 - 100 points): How well are the team and league sponsor logos displayed? Can you see them from afar? How many are included?
2. CONCEPT (0 - 50 points): Technical or artistic skills are not considered, but creativity and 'vision' are.
3. TECHNICAL, FINAL PRODUCT (0 - 50 points): How compelling is the actual final product?



Ten80 Education National STEM League Regional Event

Team Identity (Logo)

Goal & Overview

To create a team identity that symbolizes your team in viewer's minds. A team identity that is more than just a logo; it describes how to use your logo and gives example products. If you have a great logo but hide it on the wrong color T-shirt, its impact is totally wasted and your message is lost. A potential supporter or customer might walk right by without seeing you at all. The entire design is what matters in getting people's attention.

How to Compete (Procedure)

Graphic design judges evaluate the team uniforms, signs, swag, etc. that is displayed throughout the day. There are no verbal presentations or judges interviews. Only ONE printed document may be submitted during check-in: the design guide for your team's logos, color schemes, etc. Refer to the Enterprise curriculum guide for examples of a design guide. Other than that single document, graphics must speak for themselves.

Preparation

See the *Enterprise Guide*. This project describes the many aspects of an identity - it goes further than just a logo.

Scoring

Teams can earn up to 200 points based on the following evaluation criteria.

1. **CONTENT** (0-50 points): Is the submission a team logo only or is it a full team identity including logo, color scheme, merchandise examples and potentially guidelines on how to use the logo?
2. **CONCEPT** (0-50 points): Technical or artistic skills are not considered, but creativity and 'cleverness' are.
3. **TECHNICAL** (0-50 points): How well is the concept implemented by hand or design software?
4. **MERCHANDISING/BRANDING VALUE** (0-50 points): Does the identity work well on T-shirts, signs, as a car decal? Does it grab your attention from afar? Is it memorable and does it bring to mind your project?

No Verbal Presentations

A graphic identity must stand on its own, without presentation about the concept behind it. Any information you would like to convey about the concept behind your designs must be submitted in writing at the time of check-in.

