



What's Included

Turn-key camp kits provide you with the resources and training you need to run a successful STEM camp.

Curriculum & Training

- Print Pack: Curriculum with daily agenda, logbooks, prep schedule, assessments and instructions
- Training: 3 x 60 min, interactive web-based sessions.
- Downloads: Web portal where you access auxiliary resources and communicate with Ten80 and other educators.

Non-Consumable Materials:

- 1:10 Scale RC Cars with rechargeable batteries
- Stopwatches, Tape Measures
- Smart Battery Chargers
- Camp-specific materials
- List of materials you supply

Turn-Key Summer STEM Camps



NASCAR STEM Initiative

High powered radio-controlled cars are the hook and race engineering the key to success in Ten80 Student Racing Challenge Turn-Key Summer Camps.

Engage your students in design and engineering challenges that show them just how fun and relevant science, technology, engineering and mathematics (STEM) is to their world.

In the 5-day camp, participants use technology and apply science and math to maximize challenge scores. How teams optimize performance depends on your available technology and educational goals.

Students can use this non-consumable kit to compete between Oct and May each year in the a National Challenge League.

Get students excited about their future and about learning through one of the five available camps:

1. Hybrid Camp - *Ease students into applied STEM with small and big cars*
2. Race Engineering - *Light on Fabrication & Heavy on Math Modeling*
3. Race Engineering with Wings - *Light on Fabrication with emphasis on aerodynamics*
4. Fabricate Performance - *Focus on heavy design and fabrication*
5. P.I.T. Now (Petroleum Independence Now) - *Recharge your batteries with renewables*

Ten80 Student Racing Challenge - NASCAR STEM Initiative - is the 'little league' for future engineers, scientists, business, marketing and creative professionals.

Ten80 Student Racing Challenge - NASCAR STEM Initiative

Summer Camps for Rising Grades 7 - 12

To meet your students' needs, Ten80's engineer-educators offer six different camps. Contact our team to discuss your unique set of needs, resources and to build the program that's right for you.

Ten80's Camp Curriculum outlines the detailed agenda and content for a five-day camp with optional extensions. The materials kits serve as the base kit upon which you can build a formal, long-term and evolving STEM program in your science, math and technology classrooms. Training takes place over the internet in five, 1-hour sessions and is also available face-to-face.

Camp	Hybrid	Race Engineering	Race Engineering with Wings	Fabricate Performance	P.I.T. Now (Alt. Energy)
Grades (rising)	7 - 9 grades	8 - 12 grades	9 - 12 grades	9 - 12 grades	9 - 12 grades
Required Technology ¹	<ul style="list-style-type: none"> • Computer lab • Spreadsheets • Projection system • Hand tools 	<ul style="list-style-type: none"> • Computer lab • Spreadsheets • Projection system • Hand tools 	<ul style="list-style-type: none"> • Computer lab • Spreadsheets • Projection system • Hand tools 	<ul style="list-style-type: none"> • Computer lab • Projection system • Machine Shop (drill press, CNC, 3D printer, etc.) 	<ul style="list-style-type: none"> • Computer lab • Spreadsheets • Projection system • Charge Station Camp Kit
Curriculum & Kit Cost (Year 1)	\$ 5,980	\$ 5,980	\$ 5,980	\$ 5,980	\$ 5,980 + Charge Station (Add'l Mat's)
Web Training Cost	Included Year 1	Included Year 1	Included Year 1	Included Year 1	Included Year 1
Additional Material Costs ²	\$40	\$ 40	\$200 - \$300 (wing materials)	\$ 500 (fabrication materials)	\$ 500 - \$ 3,300
New Curriculum & License, Year 2+	\$25 / participant	\$25 / participant	\$25 / participant	\$25 / participant	\$25 / participant
Suggested Personnel	1 lead, 1 assistant, 1 helper	1 lead, 1 assistant, 1 helper	1 lead, 1 assistant, 1 helper, SolidWorks expert	1 lead, 1 assistant, and shop pro's	1 lead, 1 assistant, 1 - 2 helpers

Hybrid Math2Go & Ten80 Student Racing Challenge: This camp uses both the simple 'small cars' of Math2Go and the high-tech Ten80 Student Racing Challenge 'big cars'. Math2Go Challenges are solved with data that reveals clear patterns when modeled mathematically. Students then solve more complicated Ten80 Student Racing Challenges ('Big Cars'). Hybrid kit includes six 'small car stations' and 'big car' stations.

Race Engineering: Improve race performance through mathematical modeling, physics and 3D CAD Analysis. Choose the best gears, chassis geometry, map the ideal drive path around a curve and (just like the car companies do) use a skid pad and Newton's Laws of Motion to find the coefficient of friction.

Race Engineering with Wings: Improve race performance through mathematical modeling, physics and 3D CAD Analysis. Spend a little less time on choosing the best gears and wheels and more time learning about aerodynamics and fabricating a car wing to add downforce that improves handling on turns.

Machine Shop: Analyze and improve aerodynamic performance, maximize strength and minimize weight of the Ten80 Student Racing Challenge car using SolidWorks and advanced manufacturing techniques to fabricate parts for the car.

P.I.T. Now (Petroleum Independent Transportation NOW!): Examine how the resources in your own community can serve to power the Ten80 Student Racing Challenge electric cars then build a charging station to get 'off the grid'.



1 Graphing Calculators are optional in all camps. SolidWorks must be installed on network.
 2 Costs include materials you supply.
 Estimated camp costs do not include facilities, overhead, personnel, food and prizes
 3 SolidWorks is a leading, intuitive 3D design program that includes a Flow Simulator that students use as a 'Virtual Wind Tunnel'.