EDUCATIONAL WORKSHOPS, TOURS AND SEMINARS

SCHOOL YEAR 2017-18 CATALOG

Extend your educational learning experience at the NASCAR Hall of Fame by adding one or more of our grade-level workshops, tours or seminars (additional cost may apply). Programs are designed to engage students in active and problem-based learning that tap into their applied learning skills. Through a variety of curriculum-driven activities, the Hall of Fame uses real-world data and scenarios to take the classroom experience beyond the track. Cross-curricula variations of subject matters are available.

A field trip to the NASCAR Hall of Fame offers students the ability to learn and apply principles of math, science and social studies. With lesson plans that adhere to state and national standards, our team provides an educational experience that is truly an extension of the classroom. The NASCAR Hall of Fame is open 10 a.m. to 6 p.m. daily, and arrivals begin at 9:45 a.m.

ADMISSION RATES

- Students: $11.00.
- Teachers/Chaperones: $18.00.
- School groups receive one free teacher/ chaperone for every 10 students.

RESOURCES PROVIDED

- A schedule for your group visit.
- Suggested pre- and post-visit activities to extend your learning experience.
- Downloadable teacher resources to assist with planning your experience.
- A staff-led orientation.

CONTENTS

PRE-SCHOOL

AGES 3-5

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Race to Victory Lane	Students will participate in a series of six learning activities including: comparison and difference; number and color recognition/meaning; drawing in 2-D; large motor and small motor skills through a driving experience and visual observations.	pre-K	Math, Science, Language, Large and Small Motor Skill Development, Character Development	60 minutes
CURRICULUM STANDARD ALIGNMENTS	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	Understands an increasingly complex and varied vocabulary. Begins to associate number concepts, vocabulary, quantities and written numerals in meaningful ways	CD-10-12; LDC-7;APL-1; HPD-4-5	ELA-K.2;ELA-K.6; M-4K-1.4; M-K-2.2; M-4K-4.1; SE-K-4.4	

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Zoom: Race Cars on the Move	Forward, backward, green means go. Through game-based instructions, students will explore how and why cars move around the track and learn what their colors mean. They will also create and take home their own cars.	pre-K	Math, Science, Language, Large and Small Motor Skill Development	45 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	Understands an increasingly complex and varied vocabulary. Begins to associate number concepts, vocabulary, quantities and written numerals in meaningful ways	CD-10-12; LDC-8; APL-1	ELA-K.2;ELA-K.6; M-4K-1.4; M-K-2.2; M-4K-4.1	

LOWER ELEMENTARY

GRADES K-2

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Push and Pull	Forces are either a push or a pull. For a race car to move, it has to use force. Students will explore what a force is, where it impacts racing, and conduct an experiment utilizing magnets to move cars around a track. Student will take home a Discovery Pack.	K-2	Physical Science, Language Arts	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	K-PS2-1; K.CC.3	K.P.1; 1.P.1	K.P.4A.1;21.S.1A.2;2.P.4	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Art of the Race Cars	Race cars are dynamic. Their shape, design and look has changed over the years. During the workshop, students will explore the art of the race car by identifying shapes within the car, drawing a car, and coloring and painting on different mediums such as metal and vinyl. Students will get to create their own car's design. *(Allergy alert: Vinyl, aluminum and foam are used in this workshop.)*	K-2	Art, Language Arts	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	VA:Cr.1.2.1a; VA:Cr1.2.2a;VA:Cr.2.3.Ka; VA:CR.2.2.1a; VA:Cr.2.2.2a;VA:Cn.10.1.1a,Ka,2a	K.V.1.3-4; K.CR.1.1; K.V.3	VAk-2.2;VAK-3.2; VA1-1.2-3; V!1-2.4; VA2-1.1; VA2-1.3;VA-2-2.2	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Going the Distance	Math, geography and weather are all critical to the success of a race weekend. Students in this class will utilize real-world data and information to solve a series of problems while working as a team to finish the race.	K-2	Math, Geography, Weather	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	2.OA.1; 2.MD1	2.E.1.2 and 2.E.1.4; 2.MD1	K.E.3A.1;1.ATO.1; 2.E.2;2.ATO.1, 2.MDA.1;	

LOWER ELEMENTARY

GRADES K-2

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Roar of the Engines	Sound is around us each and every day. At a shop or at the track, NASCAR is a great way to explore sound waves. Students will conduct a series of sound experiments and measure sound waves for impact. Real recordings from the garage and track will be included in the experiments. Using a sound-level meter, students will graph their data for comparison of values.	1-2	Science, Math, Language Arts	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	1-PS4-1; 1-PS4-4	2.P.1-2; 1.MD.1	2.ATO.1;2.S.1A.1	

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
SPARK! (States of Matter)	Fuel (gasoline) and air combine with a spark to generate the energy it takes to move a car. During this workshop, students will explore states of matter (solid, liquid and gas) by creating a reaction car, which will move using its own energy source. Students will then compare their cars' reactions by measuring the distance traveled.	2	Science, Math	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	2-PS1.1;2-PS1-2;2-PS1-4	2.P.2; 2.MD.9	2.MDA.7;2.P.3A.1-3	

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Explore and Discover Tour	Students will join a NASCAR Hall of Fame staff member on a guided exploration tour of the building to discover some of the careers and skills in NASCAR. Students will can to try on a uniform, use an air wrench, explore track banking and much more.	K-2	Science, Language Arts	60 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	K-2-ETS1	Science as inquiry	K.S.1; 1.S.1; 2.S.1	

LOWER ELEMENTARY

GRADES K-2

SPECIAL WORKSHOP OPTIONS

EXCLUSIVELY UNTIL MAY 31, 2018

Featuring the "Cars 3: Inspired by NASCAR" exhibit

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Young Racer Challenge	During this staff-guided experience, students will participate in a series of challenges based on the young NASCAR drivers featured in the "Cars 3: Inspired by NASCAR" exhibit. Students will engineer their own cars, explore tracks surfaces, complete math problems and learn about a legend of NASCAR.	K-2	Science, Language Arts	60 minutes

UPPER ELEMENTARY

GRADES 3-5

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Object in Motion	"An object in motion stays in motion"—Newton's laws are no better represented than during a race. Students will identify the three laws of motion and how they relate to racing. They will engineer and test a race car powered by a balloon. Engineering requirements vary by grade level. *(Allergy alert: Latex balloons are used in this workshop.)*	3-5	Physical Science, Engineering, Problem-based Learning	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	3-PS2.A; 4-PS2-1; 4-PS2-2	3.P.1.1; 5.P.1	3.S.1A; 3.S.1B.1;4.S.1.A; 5.S.1A; 5.S.1B.1;5.P.5A.2	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Heating up	Friction is a key scientific lesson and is a critical element in the sport of NASCAR. During the session, students will learn about the role of friction and its impact on different parts of the car, everything from the engine to the tires. Students will conduct a series of experiments with different surfaces and angles to calculate distance and velocity.	3-5	Physical Science, Math, Technology	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	4-PS2-1; 4-PS2-2;	3.P.3; 5.P.3	3.P..2A;. 5.P.5A.5;	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Seconds Count	Fractions of a second make a difference in NASCAR. Races are won by seconds. Utilizing game instruction, students and their teammates will solve a series of NASCAR problems using their math, social studies, science and language art skills.	3-5	Math, Social Studies, Language Arts	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
			3.NSBT.3;3.ATO.8; 4.ATO.3; 4.MDA.2; 5.NSF.6	

UPPER ELEMENTARY

GRADES 3-5

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Ready! Race Strong	Physical condition, nutrition and mental fitness enhance the performance of drivers, pit crews and teams. Being ready to race and perform at top speed is put to the test every race day. Students will explore how to get race ready through a series of challenges to test their strength, wellness, senses and reaction. (Workshop is physically active.)	3-5	Physical Education, Science, Health	45 minutes (30 minutes of in-class
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	6.5.1-2; 7.5.1-3	3.NPA.1-2;4. NPA.2-3;5. NPA.3;4.L.2	P-3.3.1;P-3.1.3;N-3.1.2; N-3.1.9-10;N-4.1.2;N-4.1.4;D-5.1.1;N-5.5.2	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Sticky Phenomena	Viscosity of liquids and how they respond to heat affects the performance of a car. Students will explore different viscosities of liquids and compare them to car fluids such as water and oil. They'll also graph how heat changes the liquids.	3-5	Science, Math, Language Arts	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	5-PS-1.A;4-PS4.A	4.P.2.1;5.P.1.2;4. MD.4;5.G.2	3.P.2A.1; 5.S.1A; 5.S.1B.1;5.P.2B	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Explore and Discover Tour	During this staff-guided exploration of the NASCAR Hall of Fame exhibits, students will have a chance to discover force and motion in action. Students will explore tracks, tires and car parts; investigate air and friction as forces; and try to measure speed impact.	3-5	Math, Science, Language Arts	60 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	3-5-ETS1	Science as Inquiry; STEM	3.S.A.1;4.S.A.1;5.S.1A; 5.S.1B.1	

UPPER ELEMENTARY

GRADES 3-5

SPECIAL WORKSHOP OPTIONS

EXCLUSIVELY UNTIL MAY 31, 2018

Featuring the "Cars 3: Inspired by NASCAR" exhibit

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Fast as Lightning	Students will participate in a series of challenges highlighting the different generations of race car drivers and their cars featured in the movie. Students will create and race cars, test their math and engineering skills, explore past and present technology, and learn about the impact of turns and surfaces such as dirt, beach and asphalt.	3-5	Science, Language Arts	60 minutes

MIDDLE GRADES

GRADES 6-8

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
10 Seconds Flat	Precision and execution are essential elements in the garage and on the track. Pit stops are a clear representation of this need. During the session, students will utilize math and technology to measure, map and execute pit stops to collect data on the best strategies. As part of the session, students will use real data points from the track.	7	Math, Language Arts, Technology	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	7.RP 7.G; 8.G	7.RP, 7.G	7.EEI.1; 7.RP.3.1;7GM.1;7.GM	

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Engines! Powerhouse of Work	Energy is needed to make everything—from humans to machines—move. Students will explore the concept of energy and work and learn how it is applied to a car. Students will conduct an energy experiment by building a battery operated car. *(Instructional tool: Functional cutaway race engine, transmission, drive train and rear housing)*	6;8	Physical Science	45 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	MS-PS3	6.P.3; 7.P.2; 8.P.2;	6.S.1A;6.S.1B.1;6.P.3A.1; 8.S.1A.8.S.1B.1; 8.P.2A	

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Clean Air	Aerodynamics are a critical factor in NASCAR. The impact of air—its flow, speed and racing advantages—are analyzed in each race. Students will explore air as a force, understand how it works and conduct experiments related to its downforce and drag properties Students will utilize models, a wind tunnel and anemometers during the class.	6-8	Physical Science, Math, Language Arts	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	MS-PA2	7.P.1.2;7.P.2.2	6.S.1A;6.S.1B.1;6.P.3A.1; 8.S.1A.8.S.1B.1; 8.P.2A; 8.EEI.8	

MIDDLE GRADES

GRADES 6-8

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Tight and Loose (Unbalanced Forces)	Engineering for unbalanced and balanced forces is important in NASCAR. Car chassis and handling varies by track. While learning and using NASCAR terminology, students will study the impact of unbalanced and balanced forces and how performance is critical for speed. Students will build friction energy cars. *(Allergy Alert: Rubber bands are used in this workshop.)*	7-8	Physical Science, Math, Language Arts	30 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	MS-PA2	7.P.1; 7.P.2	8.S.1A.8.S.1B.1; 8.P.2A; 8.EEI.8	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Kapow!	Chemical reactions are essential for engine performance. The power of an engine is the result of gas and air combining before combustion. Students in this class will build reaction cars to test the chemical reactions needed to power their vehicles.	6-8	Physical Science	45 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	¬MS-PS1.B	8.P.1	7.S.1A; 7.S.1B.1;7.P.2B.3-5; 7.DSP.4	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Explore and Discover Tour	During this staff-led tour of the NASCAR Hall of Fame, students explore forces through aerodynamics, car design, engine development and driver safety. Students will participate in mini-experiential learning problems in small groups.	6-8	Language Arts, STEAM	60 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	MS-ETS1	Science Inquiry	6.S.1A;6.S.1B.1;7.S.1A; 7.S.1B.1	

HIGH SCHOOL SEMINAR

GRADES 9-12 INCLUDING CTE

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Keeping the Wheels on the Race Car	Whether in the form of sponsorships, promotion, social media or gear, NASCAR, since its inception, has needed support to keep the wheels of the cars moving. Students will explore how marketing and sponsorships shape every aspect of the sport—from the teams to the tracks. As part of a challenge, students will create a pitch to persuade the "client" to provide the support and resources they need to build a car. Teams will then build and race a functional "car."	9-12	Marketing, Sports Marketing, Communications	60 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	Not available at national level	Supports MH1; MU32; Marketing and Entrepreneurship Education	Supports course 5425 (Sports Marketing)	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
From Chemistry to Power	The engine is the heart of a race car, and its performance is a critical aspect of a team's success on any given race day. During this science- and engineering-focused class, students will learn how combustion and friction rev up race engines. They'll explore the way chemical compositions, viscosity and the effective use of power maximize thework within an engine. Students will conduct an experiment, during which they'll see firsthand how chemical reactions transform energy and energy makes it possible to race a car. *(Instructional tool: Functional cutaway race engine, transmission, drive train and rear housing)*	9-12	Chemistry, Physics	60 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	HS-PS1.B; HS-PS2; HS-PS3	Phy.1.1; Phy.2.1; Chm.2.1-2; Support Automotive IT 11; IT 17	H.C.4A.1; H.C.6A; H.P.1B.1; H.P.2A; H.P.2B;H.P.3A; Supports Automotive Tech	

HIGH SCHOOL SEMINAR

GRADES 9-12 INCLUDING CTE

PROGRAM TITLE	CLASS DESCRIPTION	GRADE	SUBJECT AREA(S)	PROGRAM LENGTH
Innovation and Innovators	"Reinvent the wheel" is what NASCAR pioneers, engineers and innovators have been doing since racing began. The NASCAR Hall of Fame celebrates those who have made significant contributions to the sport. Students will utilize data sources, images and research to construct and present a nomination platform for a racing legend to become part of the Hall of Fame. Students will vote based on the presentation. *(Mock nomination/voting panel experience)*	9-12	English, Social Sciences, Business	90 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	CCSS.ELA-LITERACY.RI.9-10.1; CCSS.ELA-LITERACY.RI.9-10.10; CCSS.ELA-LITERACY.SL.9-10.4; CCSS.ELA-LITERACY.SL.9-10.5; CCSS.ELA-LITERACY.SL.11-12.5	SL: 9-12-1-6	MC-5.1; LCS 4.2	
PROGRAM TITLE	**CLASS DESCRIPTION**	**GRADE**	**SUBJECT AREA(S)**	**PROGRAM LENGTH**
Speed!	Velocity and management of speed through angles of banking have impacted the design and function of race cars since NASCAR's inception. Students will utilize a series of cars (remote, CO2 and future design) to determine the ideal speed on different track surfaces and banking to make project-based recommendations. *(Additional course work is required at school.)*	9-12	Math, Physics, Automotive Science, Technology	90 minutes
CURRICULUM STANDARD	**NATIONAL (NGS, CCS)**	**STATE STANDARDS NC**	**STATE STANDARDS SC**	
	HS-PS1.B; HS-PS2; HS-PS3	Phy.1.1; Phy.1.2	H.P.2A; H.P.2B;H.P.3A	

ADDITIONAL INFORMATION

ADD-ONS

- Simulator racing experience: $3 *(54" height requirement)*
- Souvenir lanyard: $3 plus tax

LUNCH OPTIONS

We offer three lunch options. In order to ensure your lunches are ready on time, bag lunch orders must be confirmed with your ticket order in advance.

- Hot dog, chips and water: $5
- Chicken tenders, french fries and water: $7.
- Turkey or ham sandwich, chips and water: $7.

BUS PARKING

Bus parking is free of charge in the bus lane located on Brevard Street. Please advise NASCAR Hall of Fame staff of your bus parking needs. Please consult the parking information on our website, *nascarhall.com/tickets/* directions-parking, for the best directions. If using A GPS/Map for directions, please route to the following address: 500 S. Brevard St.

NOTE: The NASCAR Hall of Fame's official address—400 Martin Luther King Jr. Blvd.—will lead you to the wrong side of the street off of Interstate 277.

PAYMENTS

Check, cash and credit cards are accepted. Payment is due 5 business days in advance of your trip, and changes can only be made prior to final payment.

ADDITIONAL INFORMATION

For groups who don't opt to purchase bag lunches, please note that no outside food or beverage may be brought in to the NASCAR Hall of Fame. Groups may opt to bring a bag lunch and eat on the plaza in front of the building. The plaza includes benches and trash cans. Please advise NASCAR Hall of Fame staff when you plan to eat on the Ceremonial Plaza.

Students are welcome to enjoy all that we have to offer in the NASCAR Hall of Fame Gear Shop. Students must be accompanied by a teacher/chaperone while in the Gear Shop (Gift Shop).

CANCELLATION POLICY

Full payment is due 5 business days in advance. Cancellations within 5 business days of visit can be rescheduled within a 12-month period.