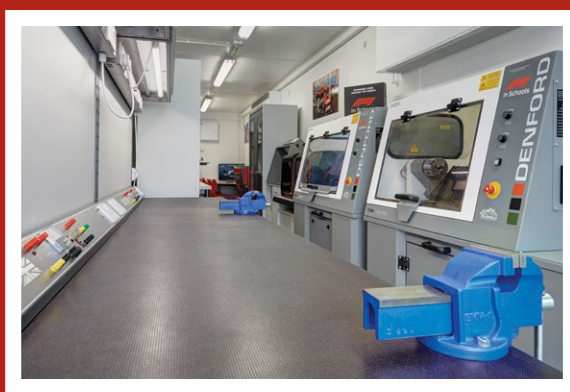
F1 in Schools

DENFORD®

INTRODUCING THE

F1 in Schools STEM STUDIO

A complete, instant solution for engineering education for schools and colleges around the world.



Coupling a fully-resourced standalone facility with the internationally-renowned STEM education programme, F1 in Schools, this class-leading solution is driving modern learning.

An Advanced Learning Environment

Instant STEM facility...

The F1 in Schools STEM Studio is an innovative concept, designed to deliver STEM education - launched by F1 in Schools, in partnership with Denford Limited – offering high-quality equipment and resources within a dedicated stand-alone classroom workshop.

Primarily developed to deliver the F1 in Schools programme, the fully-resourced STEM Studio additionally offers teachers the opportunity to deliver bespoke design & technology / engineering related courses.

The STEM Studio is an ideal instant solution for schools wishing to offer STEM related courses – particularly those in remote locations without access to the resources needed for STEM learning, or where lack of space / facilities may be a restriction.

F1 in Schools
STEM Studio

Create an environment where 21st century skills can flourish...

Creative and manufacturing industries around the world are increasingly calling out for education to provide school leavers and graduates who are equipped to succeed in workplaces of the future.

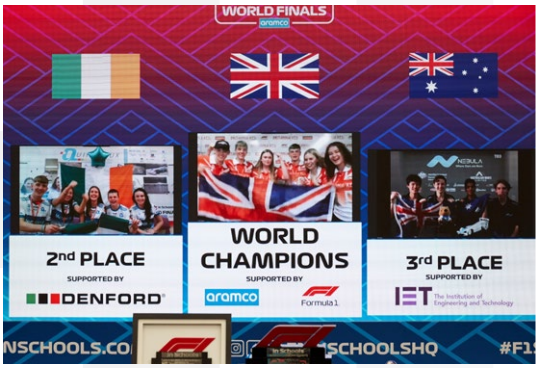
The world's rapidly changing economies require more than just hard skills, and the F1 in Schools STEM Studio provides the resources to develop not only practical skills, but also such skills as critical thinking, collaboration, creativity and communication, through a cross-curricular, multi-disciplined teaching and learning approach.

The F1 in Schools STEM Challenge

Engaging students from around the world between the ages of 9 to 19 through the magnetic appeal of Formula 1, the competition achieves its objective of changing the perspective of Science, Technology, Engineering, and Maths, which allows students to develop an informed view about careers in these fields.

Tasked with designing a world-beating race car, teams of students design, analyse, make, test and race a model race car, which will not only be air-propelled down the 24 metre long F1 in Schools Race Track in under one second, but will also be scrutinised against race regulations, and be presented to a panel of judges.

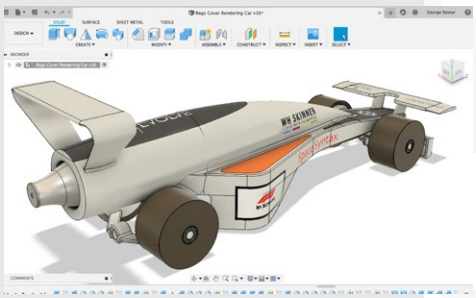
As a combined set of individual elements, the competition provides the ultimate business enterprise experience. As well as working towards the world's fastest race car, students must secure sponsorship for their projects through a well-developed pitch to potential partners, and create a compelling marketing proposition for their team, creating brands, project portfolios, and branded merchandise.

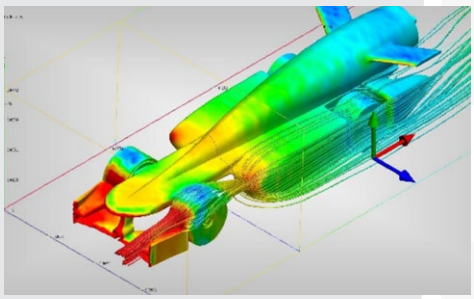


DESIGN AND ANALYSE

The F1 in Schools programme teaches students the principles of design through digital software. Autodesk Fusion 360 is provided as part of the programme, giving students access to industry-leading design software. Through easy-to-follow video support materials, they're able to design an air-propelled race car, which will compete on the F1 in Schools Race Track!

Autodesk Fusion 360 also gives students the opportunity to hone their designs by digitally simulating the air flow around their car design and analysing its aerodynamic performance through the data collected.





F1 in Schools
STEM Studio

MAKE

Having developed and tested a design, teams of students can then bring their designs to life with manufacturing techniques using CNC Routers, Mills, Lathes and Rapid Prototyping machines, as well as Laser Cutting & Engraving machines.

This industry-style experience with machinery is coupled with a range of manual techniques. Hand tools, relevant safety equipment, and materials become a valued part of this manufacturing process.

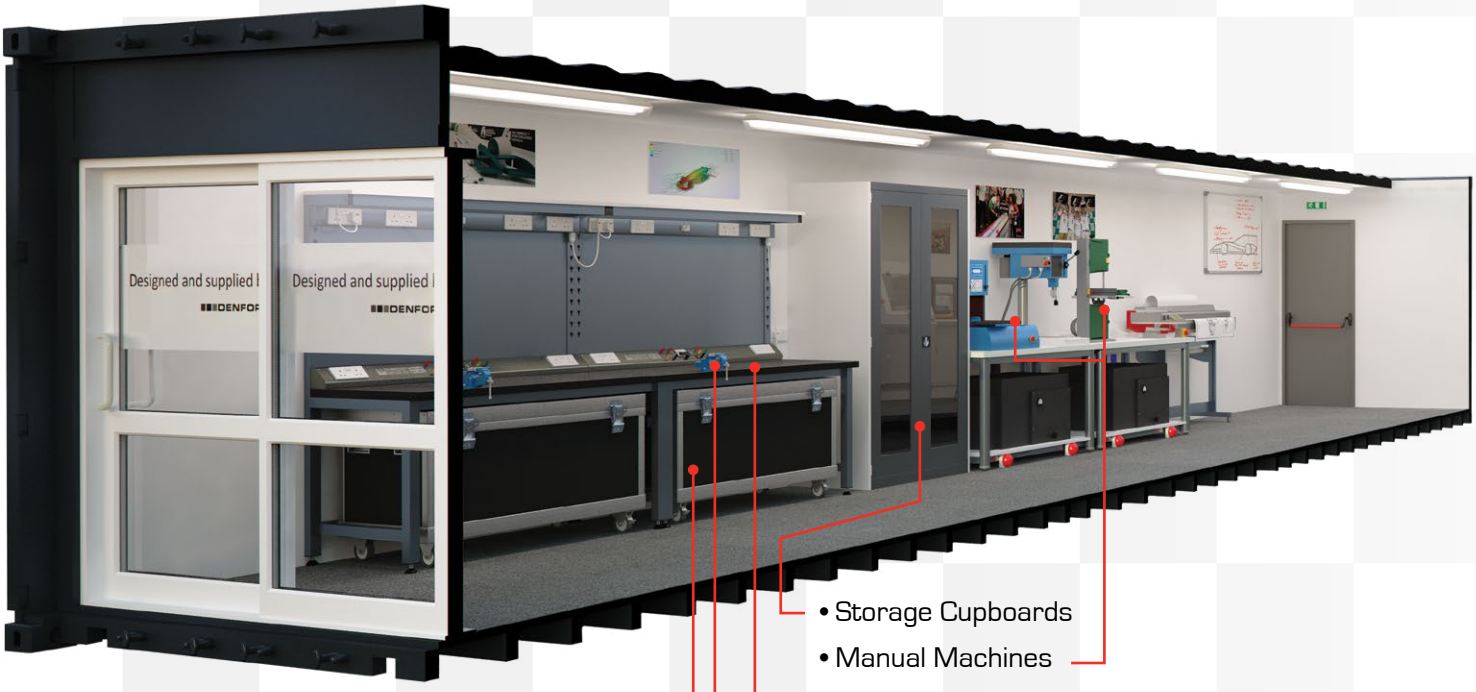
TEST AND RACE

The ultimate culmination to a race car project...!

The Air Trace Visualisation System – a scaled wind tunnel - gives teams the opportunity to visualise the true air flow around their actual race car, and allows for some final adjustments before the car takes to the track.

The F1 in Schools Race Track consists of a light aluminium, durable, moisture-resistant 24 metre track, with simple setup and breakdown mechanisms and storage case. The F1 in Schools Race Control System – a custom built data logging system – provides the software and hardware control of the race. Start and finish gates, start boxes, triggers and multi-mode anti-glare display screens provide an immersive experience, where teams combine their data collection and analysis skills with a high-adrenaline F1 race day.

What's in the F1 in Schools STEM Studio?



What's inside...

Featuring a collaboration area with audio visual equipment, the air conditioned* STEM Studio incorporates CAD/CAM and woodworking machinery, a laser engraving machine, 3D printers, F1 in Schools Test and Race equipment, as well as work benches with power trunking, storage cupboards and a full complement of hand tools and accessories.

Price includes positioning of the STEM Studio, installation and training.

F1 in Schools STEM Studio requires the following:

- A cabled 3 Phase 415V Power Supply
- A solid flat surface for location

STEM Studio Dimensions:

40ft Long x 9ft 6in High x 8ft Wide

*The Tropical Version of the STEM Studio is fitted with a higher specified Air-Conditioning System to cope with extreme temperatures

F1 in Schools
STEM Studio

- F1 Test Equipment - Air Trace Visualisation System
- F1 Race Equipment - F1 Race Track & F1 Race Control System
- F1 Class Car Consumables
- Denford CNC Router - Router 2600 Pro
- Denford CNC Lathe - Turn 270 Pro
- 3D Printers x2
- Laser Engraving Machine - VLS Series
- Collaboration area with AV Equipment
- Laptop Computers for Operation of CNC Machines, Laser and 3D Printers

Note: STEM Studio contents are subject to variation.

Want to know more?

The F1 in Schools STEM Studio has been developed collaboratively by F1 in Schools and Denford Limited.

F1 in Schools STEM Challenge

F1 in Schools Limited is a not-for-profit company, established with committed partners, to provide an exciting, yet challenging, educational experience through the magnetic appeal of Formula 1. It was launched in the UK in 2000 in 8 schools and now operates in over 26,000 schools across 52 countries worldwide.

The F1 in Schools STEM Challenge aims to raise standards across schools, promoting student achievement in STEM-related subjects and beyond, developing the next generation of engineers, technicians, scientists, and entrepreneurs. Students from all backgrounds and of all abilities are encouraged to take part in the Challenge, which sets realistic performance goals and offers a variety of different entry levels, helping students to develop their skills as they progress from one level to the next.

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DENFORD®

A British Manufacturer, with a world-wide reputation for quality and technological excellence, Denford Limited has established itself as a leading global provider of CAD/CAM solutions and projects for education - designing and manufacturing a comprehensive range of CNC milling machines, lathes and routers, which are a familiar feature in STEM (Science, Technology, Engineering and Maths) and Engineering facilities throughout the world.

As Proud Founders and Sponsors of the F1 in Schools STEM Challenge, Denford is the official supplier of all F1 in Schools-related Design, Analyse, Make, Test and Race equipment, which is all designed and manufactured in the UK.

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