

# F1 in Schools Package

A COMPLETE PACKAGE INCORPORATING DESIGN, ANALYSE, MAKE, TEST & RACE

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The F1 in Schools Technology Challenge stimulates a student's interest in, and understanding of, the entire process of design and manufacture. Through involvement in the F1 in Schools project, students will gain first hand experience of teamwork, and communication, whilst encouraging individual flair and confidence. The F1 in Schools project provides students with the opportunity to reflect industrial working practice of developing a product from concept, to prototype to production.



In support of the F1 in Schools Technology Challenge, Denford offer an F1 Package, which includes all of the equipment required to get you up and running for this innovative educational project - covering Design, Analyse, Make, Test & Race.

**A brief overview:**

- 1. Design:** Design the car body using SolidWorks 3D CAD software. SolidWorks is available as a multiple user licence.
- 2. Analyse:** Use Virtual Reality Wind Tunnel Software and SolidWorks to analyse car designs for velocities, pressures, vibration analysis, lift & drag and much more.

- 3. Make:** After the 3D model is complete, import the design into Denford's QuickCAM Pro software to generate the CNC file. Graphically verify the CNC file by using Denford's Virtual Reality CNC routing software and then manufacture the car using Denford's F1 Car Manufacturing Fixture on either the Compact 1000 or Router 2600 CNC Router.
- 4. Test:** The manufactured car can be tested for drag efficiency and air flow around the vehicle with the Scout Wind Tunnel & Fog Maestro Smoke Generator.
- 5. Race:** Put the cars to their ultimate test and judge their speed over a measured distance with the F1 in Schools 24m Elevated Race Track and F1 Race System.

**The F1 in Schools Package:\***

**DESIGN:**  
SolidWorks Education Edition - 3D Design, Drafting & Simulation Software (available separately - see page 6 & 7).  
QuickCAM Pro Advanced Milling/Routing CAM software (site licence).

**ANALYSE:**  
Virtual Reality Wind Tunnel (VRWT) Software (single licence).

**MAKE:**  
**CNC Machine Options**

- Router 2600/Router 2600 Pro (Metal Cutting).
- Compact 1000/Compact 1000 Pro (Metal Cutting).

**Car Manufacture Fixture**  
F1 in Schools Car Manufacturing Fixture for both D & R Type Cars.

**Consumables - R Type/D Type Cars**  
R Type Balsa Wood Blanks - Pack of 20.  
Fusion Wheels - Black - Pack of 100.  
Screw Eyes 1" - Pack of 100.  
Long Axles - 65mm - Pack of 100.  
Straw Wheel Spacers - Pack of 500.  
Washers - 4mm - Pack of 100.  
Decal Stickers - Pack of 25 sheets.  
Paint Stand.

D Type Balsa Wood Blanks - Pack of 20.  
PX Wheels - Rear - Black - Pack of 100.  
LX Wheels - Front - Black - Pack of 100.  
Screw Eyes 1/4" - Pack of 100.  
Short Axles - 43mm - Pack of 100.

**TEST:**  
Scout Wind Tunnel.  
Fog Maestro Smoke Generator including 1Ltr. Fog Fluid.

**RACE:**  
Elevated Race Track - 24m track.  
F1 Race System - x1 Start & Finish Gate, x2 Launch Triggers, x2 Launchers, x1 Power Supply, x1 Control Box, Race Time Management System, 8 Gram Competition Cartridges (pack of 120).



For the full range of F1 consumables & race equipment see pages 48 - 53

\* Outside the UK, package contents may vary. Please refer to your dealer/agent.

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