



THE FORMULA ONE™ TECHNOLOGY CHALLENGE

IN SCHOOLS



Get Involved!

F1 Team In Schools Challenge

Brief

- Design the fastest Formula 1™ Car of the future.

The Challenge

- Students will first need to contact the teacher.
- Organize a team of at least three to a maximum of six students.
- Design your car with 3D CAD software (e.g., Autodesk Inventor)
- Analyze your design using software (e.g., Virtual Wind Tunnel software).
- Make your cars using a CNC machine (e.g., Denford Microrouter or manufacturing center/partner).
- Test finished models in a smoke tunnel and a wind tunnel (e.g., Pitsco FLO: Flow Visualization Tunnel and AirTech X-Stream Wind Tunnel)
- Paint models to a high degree of finish and add graphics.
- Then, the race is on!!!

Teams will be invited to attend a state level final to compete for a place in the National Final.

The overall national winning team will be invited to represent the U.S. at the International final.

www.f1inschools.us

Annual National Final
June every year



"Engineering is about people doing highly skilled work, and it is important to introduce this reality of industry into the classroom."

Right Honorable
Tony Blair
Prime Minister

10 Downing Street
London, United Kingdom

Autodesk®



To get involved contact:

Teacher: _____

Room Number: _____



THE FORMULA ONE™ TECHNOLOGY CHALLENGE

The F1 in Schools five step process design, analyze, make, test and race meet a portion of the following National Standards:

- Standards for Technological Literacy (STL)
- National Council of Teachers of Mathematics (NCTM)
- National Science Teachers Association (NSTA)

STEP 1 DESIGN



During the design phase, team members:

- Produce design ideas
- Use CAD program
- Build display of work

National Standards addressed:

- STL Standards 2, 8, 9, 11
- NCTM Standards 2, 3, 4
- NSTA Standards A

STEP 2 ANALYZE



During the analyze phase, team members:

- Test designs
- Evaluate results
- Refine design

National Standards addressed:

- STL Standards 3, 8, 9, 11
- NCTM Standards 5, 7, 8
- NSTA Standards A, B

STEP 3 MAKE



During the make phase, team members:

- Transfer CAD to CNC
- Manufacture with CNC mill
- Finish car with paint

National Standards addressed:

- STL Standards 8, 9, 11, 19
- NCTM Standards 1, 4, 10
- NSTA Standards A, B

STEP 4 TEST



During the test phase, team members:

- Perform aerodynamics test
- Prepare verbal presentation
- Complete specification sheet

National Standards addressed:

- STL Standards 3, 9, 11, 17
- NCTM Standards 2, 5, 6, 10
- NSTA Standards A, B

STEP 5 RACE



During the race phase, team members:

- Select driver
- Race their F1 car
- Test reaction time

National Standards addressed:

- STL Standards 3, 9, 11, 16
- NCTM Standards 2, 6
- NSTA Standards A