Introduce STEM learning at an early age, with the Denford Primary STEM Project - encouraging your Primary Students to design their own miniature racing car, then go on to test its aerodynamic qualities using the unique roll-out race track, and re-evaluate their designs to produce a winning car!

What students will learn:

• Science applied to the real world
• The process: research, design, make, test, modify, race
• Teamwork
• How to closely follow instructions
• Speaking and listening skills
• Recognising personal strengths and strengths in others

Make STEM learning exciting and fun with this innovative classroom resource!
BUILD A CAR CHASSIS

Students start the process by folding a pre-stamped chassis net, closely following the instructions provided, to make a basic 3D racing car, to which they add wheels and axles.

DESIGN / BUILD A CAR BODYSHELL

Following research, students go on to design, make and decorate a bodyshell to create their own miniature racing car, using the template provided with the instruction sheet. Their research will be based on scientific knowledge on subjects such as air resistance, gravity and air pressure, which are incorporated into our free of charge Fact/Activity Sheets.
Once the cars are finished, students are able to test the aerodynamic qualities of their designs, using the Launch System and Race Track to race their cars. In this exciting stage of the project, students get to see how their ideas and designs shape up against others.

It’s not just about winning, but about:
- Seeing ideas come to life
- Developing sportsmanship

**Primary STEM Project Equipment**

**Primary STEM Project Pack: ARCP02**
Supplied in storage box with lid
Includes:
- Primary STEM Project Chassis Nets (Pack of 100)
- Propulsion Tubes (Pack of 50)
- Propulsion Tube End Caps (Pack of 50)
- Axle Guides (Pack of 50)
- Tether Guide Tubes (Pack of 50)
- Primary Project Wheels (Pack of 100) x 2
- Axle Bushes (Pack of 100) x 2
- Axles (Pack of 100)
Items can be purchased separately

**Primary STEM Project Launch System: F1AR001000A**
Includes:
- Air Launch Control Box
- Air Launch Pump – up to 8 bar
- Loading Pins
- Tether Block Assembly
- Tether Guide Line 0.6 mm dia

**Primary STEM Project Roll Out Race Track 10m: F1AR/0900**
STEM Classroom Activity

Paper Aeroplane Challenge

- Videos
- Classroom Activities
- Fact Sheets
- Instruction Sheets

and Maths Curriculum, covering Science, Technology, Engineering and Maths Curriculum Resources, mapped to the Primary National STEM-related subjects and more:

you to deliver inspirational and interactive lessons for Free downloadable materials are available to help you to deliver inspirational and interactive lessons for STEM-related subjects and more:

- Curriculum Resources, mapped to the Primary National Curriculum, covering Science, Technology, Engineering and Maths
- Instruction Sheets
- Fact Sheets
- Classroom Activities
- Videos

The Denford Primary STEM Project brings real-life applications of STEM to your classroom in a fun and exciting way. Classroom Activity Sheets are available free of charge to inspire students and help them develop their STEM skills through practical, hands-on activities, encouraging creativity, problem-solving, communication, confidence and teamwork.

Free downloadable materials are available to help you to deliver inspirational and interactive lessons for STEM-related subjects and more:

Things to think about...

What forces are acting on the paper aeroplane?
How does the shape of the aeroplane affect the distance it travels?

SAFETY WARNING!
Always remember that everyone should stand well back, behind the aeroplanes, when they are being launched.

PRIMARY

What is a parachute?
A parachute is a bag that lets a person or object fall more slowly than it would if it fell straight down.

How does gravity work?
Gravity is the force that pulls objects towards the ground. Gravity stops us floating off in to space.

Things to think about...

What forces are acting on the objects?

Air resistance is caused by air pushing against a moving object. The air pushes ever been on a roller coaster, or cycled fast downhill, you might have felt this air resistance as wind on your face. A parachute uses air resistance to slow down an object's descent to the ground.

Aerodynamic means having a shape which reduces the drag from air moving past.

Forces

Air Resistance & Gravity

Things to think about...What will happen if you drop a cannon ball and a feather at the same time from a high building? Do the modifications affect how fast/far the air launch system. You can now test your car. Consider about how weight will affect the speed of the car.

PRIMARY

The Project also lends itself to teaching a wide range of subject areas across the curriculum, including Art & Design, English, Geography, History, PE and Nutrition.

Building life skills, not just STEM...
The Project also lends itself to teaching a wide range of subject areas across the curriculum, including Art & Design, English, Geography, History, PE and Nutrition.