

Rocket Technology Day

Subject Area(s):	Physics, Chemistry and Technology
Key Stages:	Ideal for KS 3 and 4
Time Requirements:	
Set-Up Time	30 Minutes
Duration	1 Day
Set Down Time	30 Minutes



Description:

A full day activity in which students are introduced to the world of rocket science, the day is divided into three stages each designed to follow on from the previous one.

- **TO GO BOLDLY** - an interactive presentation in which the audience is led through man's most important space achievements, from the first rockets to the new space race... the private space industry
- **PROPULSION LAB** - this visually impressive show full of explosive experiments and demonstrations will serve as an introduction to how rocket engines work. From the Newtonian principles behind flight to the firing of a real rocket engine... it is a great link between theory and science in action
- **ROCKET FACTORY** - closely supervised by SPACE4SCHOOLS staff, students will have the opportunity to put theory into practice by building their own rockets. A variety of models (up to 1 metre in height!) will be supplied all of which are safe, reliable and reusable

The day will culminate in the spectacular launching of the students rockets.

Learning Points:

- The history of space travel
- Newtonian physics and its relationship to rocket propulsion
- General structure and function of rockets
- Chemistry of rocket propulsion

Group / Class Size:

80 maximum (building rockets in groups of 4)

Space Requirements:

Presentation - seating space for audience.
 Propulsion Lab - presentation area including two tables with a minimum clearance of 2 metres to audience
 Rocket Factory - area for construction with flat surfaces (e.g. tables)
 Outdoor area for launching (minimum size of a football pitch)

Equipment Requirements: Data projector
Screen and speakers (in general computer speakers are inadequate for the task)
Suitable surfaces for cutting and glueing.

Notes: It is strongly advised that smoke detectors in or around the Propulsion Lab demonstration area be disabled.
In addition to the SPACE4SCHOOLS staff two members of the school staff should also be present

Rocket Technology Day

Package Breakdown

Rocket Technology Day is a full day session.

These times are approximations. The day is designed to be as flexible as possible within your school day in order to give students ample time to complete construction of their rockets.

Safety briefings are built in to the schedule prior to construction and launch.

09:00 - 10:00 - The Sky Is Not The Limit

10:00 - 11:00 - Rocket Construction (Phase 1)

11:00 - 11:30 - *Break*

11:30 - 12:30 - Propulsion Lab

12:30 - 13:30 - *Lunch*

13:30 - 14:30 - Rocket Construction (Phase 2)

14:30 - 15:30 - Launch