

# Year 3/4 pupils – Gravity and Gunpowder

Date of course	Times	Venue	Cost	Max. places	Subject
Monday 22 <sup>nd</sup> November 2021	9.30am – 3.30pm	Braeside Education Centre	£60	16	Science AGAT

## Course details

Rocket science is always an extremely popular topic at Braeside, featuring an explosive mix of physics and fun! This special day course begins with an exploration of aerodynamics and Newton's Laws of Motion, followed by rocket design and the propellants used to launch them. To reinforce their learning, students will plan and build their own model rockets. Computer simulation will be used to check each rocket's stability in theory before launching for real later in the afternoon. The pyrotechnic rocket motors used are specifically designed for this course and remotely fired. They are both exciting and safe. The students do not handle any form of explosive at any time and safety is paramount.

## Guidance criteria for identifying participants:

- Pupils should have an interest in physics and an enquiring mind.
- Pupils will need to be able to work confidently, both individually and in small groups.
- Pupils must be willing to generate ideas based on scientific data and transfer these ideas into a completed creative product.
- Pupils must want to share the academic and practical challenges of the course – and the fun!

## Course tutor

**Adrian Dening** has over thirty years' experience in delivering science courses for Able, Gifted and Talented students. He offers a wide range of topics exploring electronics, ICT, space science and even spying! He is a keen Amateur Radio enthusiast and astronomer. Adrian is an Approved Driving Instructor and member of the Chartered Institute of Personnel and Development. His G&T courses are challenging, with a balance between theory at a high academic level and fun practical exercises to consolidate what has been learnt. All courses include the assessment of written work and note-taking, providing the basis of feedback to parents. The courses involve a mix of individual and group activities and students are actively encouraged to explore different learning styles, take responsibility for their own time management and think "outside the box". A full portfolio of Adrian's courses is available at <http://www.AdrianDening.com>

## As a result of attending the course you will have:

- A greater understanding of space exploration and the technologies that support it.
- Worked successfully on an individual project.
- Been responsible for a practical project at all its stages from initial design to final testing.
- Enjoyed new challenges and shared your knowledge with new like-minded friends.

## Students should bring:

- Pencils / pencil case
- Notebook/paper
- Water bottle
- Clothes suitable for outdoor play

**Lunch and refreshments are provided.**

**School uniform is not required.**

**No mobile phones.**