IMAGING PARTNERSHIP

Exploring Education Through Imaging

Applied Science
Branch

Through a series of entertaining and educational workshops, based on practical hands-on experiences, this course is designed to give an appreciation of how Applied Science contributes more and more to everyday applications, through the medium of Photography/Imaging and for pupils to gain an insight into a range of related careers. Each session incorporates facts and stories about the future of Applied Science.

Breakdown of Sessions for the Applied Science Workshops:

- Aerospace

Learning opportunities include:

- Astrodynamics – the study of orbital mechanics including prediction of orbital elements when given a select few variables. While few schools in the United States teach this at the undergraduate level, several have graduate programs covering this topic (usually in conjunction with the Physics department of said college or university).
- Statics and Dynamics (engineering mechanics) – the study of movement, forces, moments in mechanical systems.
- Mathematics – in particular, calculus, differential equations, and linear algebra.
- Electrotechnology – the study of electronics within engineering.
- Avionics – the design and programming of computer systems on board an aircraft or spacecraft and the simulation of systems.
- Aeroacoustics – the study of noise generation via either turbulent fluid motion or aerodynamic forces interacting with surfaces.
- Flight test – designing and executing flight test programs in order to gather and analyze performance and handling qualities data in order to determine if an aircraft meets its design and performance goals and certification requirements.

- Civil Engineering

Learning opportunities include:

- Construction Engineering
- Geotechnical Engineering
- Environmental Engineering

- Civil Engineering

Learning opportunities include:

- Construction Engineering
- Geotechnical Engineering
- Environmental Engineering

- Robotics

Learning opportunities include:

- Sensing
- Movement
- Energy
- Intelligence