



IMAGING PARTNERSHIP

Exploring Education Through Imaging

Bio-Engineering Club

Sessions Overview

Through a series of entertaining and educational workshops, based on practical hands-on experiences, this course is designed to give an appreciation of how Biology and Engineering contributes to everyday applications, through the medium of Photography/Imaging and for pupils to gain an insight into a range of related careers.

Breakdown of Sessions for the Bio-Engineering Workshops:

Session 1: Introduction to Bio-Engineering

Learning opportunities include:

- What is Bio-Engineering?
- How does it affect us? Looking at different areas of bio-engineering
- Careers in Bio-Engineering

Session 2: Structures – Part 1

Learning opportunities include:

- What is a structure?
- What is triangulation?
- Macro Photography – recording structures in Nature

Session 3: Structures – Part 2

Learning opportunities include:

- Reviewing our learning from last week – to be used today
- Working together to produce a structure based on those recorded from Nature
- Recording the process: Documentary Photography

Session 4: Biomimetics

Learning opportunities include:

- What is meant by Biomimetics and Reverse Engineering?
- How we use discoveries from Nature to help develop new products that help improve the quality of our lives
- Exploring flight – the study of how birds to enable human flight is one of the earliest examples of biomimicry
- Using examples of how Nature works to inform our own designs

Session 5: Biomedical Engineering

Learning opportunities include:

- Researching how parts of the human body work
- What is meant by 'Bionics'?
- Designing our own '\$6-million-dollar man'

Session 6: Bio-Engineering - Agriculture

Learning opportunities include:

- What do Agricultural Engineers do?
- Looking at how Crop Production can be improved
- Experiments relating to crop production
- Recording experiments in camera