



TIMETABLE HIGHLIGHTS

Through a creative and fun series of STEM projects you will gain a good understanding of how science, technology, engineering and mathematics can be applied to solve real-life problems. You will also take part in after school and weekend excursions to experience the local area and have fun.

WEEK 1

Lectures

1

HOURS

- The Arctic Experience: Based on Antarctic collections held by the Polar Museum at the University of Cambridge. You will learn about the history of exploration and science of the Antarctic

Workshops

6

HOURS

- Combustion: Practical activities exploring energy from combustible fuels
- Power: Practical activities exploring energy generation in space and even on planets
- Rockets: Build your own model rocket for launch



Lessons

15

HOURS

- Use LEGO robotics to build, code, and adapt a robot to complete a series of challenges
- Coding: Learn about codes, ciphers and how to make and break them

Activities

4

HOURS

- Visit the National Space Academy: Take a physics masterclass filled with interactive demonstrations and practical activities
- Bowling
- Karaoke

WEEK 2

Lectures

1

HOURS

- Space travel: Learn about the 'Space Race' and develop an idea of some of the political, scientific, and historical decisions made to enable humanity to reach for the stars



Workshops

6

HOURS

- Chemical Energy: Investigate chemical reactions, testing a variety of different chemicals
- Xenobiology: Put yourselves in the shoes of a biologist sent to another planet to investigate alien life forms
- Material Science: Learn about mechanics and materials and how they apply in the construction of space shuttles

Lessons

6

HOURS

- Raspberry Pi: Build and use a Raspberry Pi system to generate computer code to complete a variety of tasks

Activities

12

HOURS

- Computer History Museum: Much more than a museum this experience involves hands-on exhibitions, educational workshops and a wide range of activities and events
- Visit the Royal Observatory in Greenwich, the iconic historic sailing ship Cutty Sark and the National Maritime Museum