FUTURE ENGINEERS

Course Overview ***2023***

SBC

Course Overview

AT A GLANCE

Price: £4,000
For Ages: 13-16
Course Length: 2 Weeks
English Level: B1+
Starting Dates: 17th July, 31st July.
Location: Headington School, Oxford
Course Objectives: Improve English Language Skills; Develop Engineering Knowledge

Engineering is at the intersection of innovation, design and construction. Utilising both science and mathematics, Engineering is the art of applying scientific and mathematical principles to solve real-world problems, such as in the construction of bridges, buildings, electronic circuits and mechanical design.

In Headington Oxford's *Future Engineering* programme, interactive and communicative Engineering course, students study an overview of various fields within this subject, such as civil, mechanical and electronic engineering. Students focus on both the scientific and mathematical principles of these disciplines and learn how these can be applied through our practical *Time to Shine* project lessons.

SAMPLE TIMETABLE

WEEK ONE

8.45-9.00	**Morning Assembly**				
9.00-10.30	**Engineering Knowledge** *An Introduction to Fields of Engineering*	**Engineering Knowledge** *Science and Design*	**Engineering Knowledge** *The Physics of Bridges*	**Engineering Knowledge** *Energy and Sustainability*	**Engineering Knowledge** *Engineering and Mathematics*
11.00-12.30	**Time to Shine Preparation Project:** *Aim for the Stars*	**Time to Shine Preparation Project:** *Aim for the Stars*	**Time to Shine Preparation Project:** *Aim for the Stars*	**Time to Shine Preparation Project:** *Presentation Preparation: Public Speaking Skills*	**Week One** *Time to Shine Ceremony*

WEEK TWO

8.45-9.00	**Morning Assembly**				
9.00-10.30	**Engineering Knowledge** *Sustainable Engineering*	**Engineering Knowledge** *Building Design and Construction*	**Engineering Knowledge** *Civil Engineering and City Planning*	**Engineering Knowledge** *Engineering and Aeronautics*	**Engineering Knowledge** *Studying Engineering at Tertiary Level Education*
11.00-12.30	**Time to Shine Preparation Project:** *Aim for the Stars*	**Time to Shine Preparation Project:** *Aim for the Stars*	**Time to Shine Preparation Project:** *Aim for the Stars*	**Time to Shine Preparation Project:** *Presentation Preparation: Public Speaking Skills*	**Week Two** *Time to Shine Ceremony*

Time to Shine
Time to Shine title: *Aim For the Stars: How to Travel to Space (and Stay There).*

Time to Shine

Space travel is powered by engineering. How do astronauts survive in space? What astronautic principles launch human driven spacecraft through the stratosphere and beyond? In this 10-hour interactive project, you will discover how engineers are preparing for life on other planets, and design your own space city of the future.

What you'll learn

- Gain an insight into different fields of Engineering.
- Develop a theoretical and practical understanding of the sciences at the core of Engineering: mathematics, physics, and technology.
- Take part in our exciting *Space Travel* Time to Shine project, in which you and your classmates will develop ideas for space travel and extraterrestrial planet colonisation.
- Through fun and engaging lesson activities, develop and apply your 21st century skills, such as critical thinking, communication skills, collaborative skills, and original thinking.