



# Future Scientists 13-16yrs



Headington Oxford



# Headington Oxford Ages: 13-16 Duration: 2 weeks English Level: B1+

### At a Glance

### **Igniting a Passion for Discovery**

Our two-week Future Scientists course is designed to fuel your curiosity and deepen your understanding of the scientific principles that govern our universe. This programme offers an immersive experience where theory meets practice, providing you with the opportunity to conduct experiments, engage in scientific research, and explore cutting-edge developments in various STEM fields.

The course places a strong emphasis on investigative learning, encouraging you to question, experiment, and discover. Whether you're fascinated by the intricacies of biology, the laws of physics, or the possibilities of technology, you will have the chance to delve into these areas under the guidance of expert educators and scientists.

Collaboration is a key component of this course.

You will work alongside peers who share your
passion for science, engaging in group projects
and problem-solving challenges that mirror real-

world scientific endeavors. These activities not only enhance your scientific knowledge but also develop your teamwork and communication skills, which are essential for success in any scientific field.

In addition to hands-on learning, the course also includes seminars and discussions on current scientific issues, ethical considerations, and the impact of scientific advances on society. This holistic approach ensures that you not only gain technical expertise but also a broader understanding of the role of science in our world.

By the end of the programme, you will have not only strengthened your scientific skills but also gained the confidence to pursue your passion for discovery.

Join us at SBC this summer, and take your first steps toward a future of innovation and exploration in the vast world of science.

### **Sample Timetable**

### WEEK ONE TIMETABLE

	Tuesday	Wednesday	Thursday	Saturday	Sunday
9:00-10:30	Lesson 1 Introduction to STEM Fields	<b>Lesson 1</b> Biology and Chemistry Basics	<b>Lesson 1</b> Principles of Engineering	<b>Lesson 1</b> Laboratory Experiments	<b>Lesson 1</b> Sustainable Energy Systems
11.00-12.30	Lesson 2 Time to Shine – Project Introduction	<b>Lesson 2</b> Time to Shine – Research and Data Analysis	<b>Lesson 2</b> Time to Shine – Group Project Discussion	<b>Lesson 2</b> Time to Shine – Project Development and Public Speaking Skills	<b>Lesson 2</b> Time to Shine Ceremony

### **WEEK TWO TIMETABLE**

	Tuesday	Wednesday	Thursday	Saturday	Sunday
9:00-10:30	Lesson 1 Robotics and Automation	<b>Lesson 1</b> Climate Science and Earth Systems	<b>Lesson 1</b> Space Exploration and Astrophysics	<b>Lesson 1</b> Artificial Intelligence and Machine Learning	<b>Lesson 1</b> Future Trends in Technology and Science
11.00-12.30	Lesson 2 Time to Shine – Project Introduction	<b>Lesson 2</b> Tirme to Shine – Research and Data Analysis	<b>Lesson 2</b> Time to Shine – Group Project Discussion	<b>Lesson 2</b> Time to Shine – Project Development and Public Speaking Skills	<b>Lesson 2</b> Time to Shine Ceremony





### **Course Objectives**

Welcome to Future Scientists, an inspiring and hands-on science programme designed for inquisitive students aged 13-16. At Headington School, we are passionate about nurturing the next generation of scientists by making science both accessible and exciting. This course allows you to explore a variety of scientific disciplines, from biology and chemistry to physics and environmental science. Whether you're a budding biologist or a future physicist, Future Scientists will ignite your curiosity and help you discover the wonders of the scientific world.

### Module 1

# Understanding the Natural World

Delve into biology and ecology by learning about the structures and functions of living organisms, ecosystems, and species interactions, with hands-on experiments and outdoor activities to appreciate the diversity of life and the importance of conservation.

### Module 2

# Exploring the World of Chemistry

Explore the principles of chemistry, including the structure and properties of matter, chemical reactions, and the role of chemistry in everyday life, through practical experiments that deepen your understanding of this fundamental science.

### Module 3

# Investigating Physical Science

Investigate the principles of physics by exploring energy, forces, and the laws of motion, conducting experiments to understand real-world applications, and building a strong foundation in physical science for future studies.



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### **Time to Shine**

For your Time to Shine project, you'll dive into an exciting scientific investigation that lets you explore a topic you're passionate about. Whether it's conducting an experiment, designing a prototype, or exploring the latest tech innovations, this project will culminate in a dynamic presentation where you'll share your findings, demonstrate your creativity, and show off your scientific knowledge in front of your peers and instructors.

### Previous projects include:

### Building a Sustainable Future: Designing an Eco-Friendly Home Model

A project where a student created a detailed model of a sustainable house, integrating renewable energy solutions and eco-friendly materials, and explaining how these innovations could help combat climate change.

This project is your chance to think like a real scientist, tackle real-world challenges, and present your groundbreaking ideas that could one day change the world.



# Our Approach to Your Learning

Designed to inspire and empower young learners. We believe that science is best learned through exploration and experimentation, so our lessons are packed with interactive activities that encourage you to ask questions, test your ideas, and think critically. Our supportive teachers are dedicated to making science fun and engaging, ensuring that you build confidence in your scientific abilities while fostering a lifelong love of learning. Whether you're working in the lab or exploring the natural world, we aim to make every moment of your scientific journey both exciting and educational.



### **Academic Content**

15 hours of subject-specific academic content per week with a subject tutor, delivered through interactive and hands-on lessons.



### **English Level**

Students require a minimum English level of B1+ to enrol onto this programme.



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+44 (0)1943 878518 info@summerboardingcourses.co.uk



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