



The National  
**Mathematics  
and Science**  
College

# **SUMMER SCHOOL**

**2026**

# ***INFORMATION ABOUT COLLEGE***

**The National Mathematics and Science College is an independent sixth form boarding and day college specialising in A-level STEM subjects for students aged 15 -20, aiming to study at the world's leading universities.**

Among the best schools in the UK, The National Mathematics and Science College is the only boarding school in the UK dedicated entirely to STEM (Science, Technology, Engineering and Mathematics) education. As such, we are unique, and something unique is always worth a closer look. Our philosophy of teaching, our proven latticework of pastoral care, and even our new residential buildings all help our students to leave their comfort zones. We are a community of like-minded people, with some of the finest, most successful teachers in the country.

Students live together in contemporary accommodation next door to the teaching centre in the heart of leafy Warwickshire. Each student has their own luxury en-suite study bedroom with a double bed, desk, wardrobe, under-bed storage and highspeed Wi-Fi. The rooms provide a calm and comfortable space for students to study and live independently, within a university-

style environment. The boarding residence has a large number of open plan kitchen and living rooms, with ample space for relaxing, socialising and eating together. The kitchens are fully equipped and have dining space, as well as comfortable seating and televisions. Meals are fully catered for in the College's onsite restaurant, but students are welcome to use the kitchens to prepare additional food and snacks outside of mealtimes. There are a number of indoor and outdoor communal spaces for the students to enjoy including a gaming area, coffee hub, collaborative working spaces and gym/fitness facilities.



# THE LOCAL AREA

The National Mathematics and Science College is situated on the edge of Warwick University in the leafy and picturesque area of Westwood Heath in Warwickshire.

With excellent transport links it is easily accessible by rail, bus and car. London and Birmingham can both quickly be reached allowing students to experience some of the sights and sounds of the UK.



*EXPERIENCE*

# ***NATMATSCI THIS SUMMER***



Our Summer Programmes offer a chance for students to stretch and challenge themselves in one of several areas of the STEM curriculum, and for a short period become part of the vibrant and ambitious NatMatSci community with other students from around the world.

During your time at NatMatSci you will experience world class teaching, and have the chance to develop your mathematical and scientific skills as part of our community of likeminded individuals who share your passion for Mathematics and Science!

## **Safety and Supervision:**

Our summer programmes prioritise a safe and supportive environment, with all staff holding full DBS checks and trained in comprehensive safeguarding protocols.





# *Preparing for a Career in Medicine: UCAT, Interviews and Application Mastery at NatMatSci*

Summer programme for aspiring medical professionals aged 15-17

Embark on a week-long course designed for aspiring medical students who want to experience life as a future doctor. Through lectures, workshops, and practical sessions, students will explore medical science and clinical skills while gaining valuable insight into medical school preparation.

## **Dates:**

Sunday 12th to Sunday  
19th July 2026

## **Advanced Medical Training and University Preparation:**

**Course highlights include:**

**An Introduction to Anatomy and Physiology:** Explore the structure and function of the human body with expert guidance.

**Practical Clinical Skills Workshops:** Instructor-guided suturing and dissection workshops to allow students to hone their practical skills.

**Medical Ethics and Human Rights:** Discuss the ethical issues and human rights considerations in medical practice.

**First Aid Certification:** Receive certified training in first aid, equipping you with vital, life-saving skills.

**UCAT/MMI Preparation:** Engage in targeted sessions to excel in university clinical aptitude tests, crucial for UK medical school applicants.

**Personal Statement Workshops:** Professional guidance to aid students with crafting their personal statements for success at application stage.

## **Programme Features:**

**Interactive Learning:** Benefit from lectures, hands-on-workshops and interactive sessions led by experienced professionals.

**Career Preparation:** Gain insights into medical school applications and test preparation to set the stage for a career in medicine.

**Certificate of Completion:** Earn certificates in first aid, and a course completion certificate that showcases your readiness for medical studies.





- A ladder of length  $L$ , mass  $m$  lies on a smooth wall
- The coefficient of friction with the floor is  $\mu$

angle  $\theta$

Height of the ladder

When the ladder is just about to slip,  $f = \mu N$ , and the ladder is in limiting equilibrium.

$\Rightarrow$  equilibrium (translational)

$$N_2 = \mu N$$

$$\tan \theta = \frac{N_2 + f}{N_1}$$

$$\Rightarrow \frac{2\mu N}{N} = \mu$$

$$\Rightarrow \theta_{\max} = \arctan(\mu)$$

• C)  $\downarrow$  equilibrium (rotational)

$$\Rightarrow \frac{L}{2} \cos \theta (N_2 + f) = \frac{L}{2} \sin \theta N_1$$

## ***EAL Summer School: English for Academic Success at NatMatSci***

**STEM & Cultural Gateway: Two-Week, Pre-A-Level Immersion Programme, for students aged 14-17**

This course is the essential first step to a top UK education, linking both science (STEM) and classic English culture. The programme blends academic learning with creativity, giving students opportunities to practice English in real contexts while developing scientific understanding. Activities can include laboratory sessions inspired by Shakespearean themes, and drama-based EAL lessons to build confidence in spoken English.

### **Dates:**

**Sunday 12th to Sunday  
19th July 2026 and/or**

**Sunday 19th to Sunday  
26th July 2026**

### **Setting up for Success:**

#### **Course highlights include:**

**Subject Specific Workshops:** Gain hands-on experience in practical science activities linked to literature and history, both in the lab and in the classroom.

**Debates and Discussions:** Engage in thought provoking debates and discussions on controversial scientific topics to enhance critical thinking and argumentative skills.

**Educational Trips and Activities:** Two cultural excursions are included; a day in London to experience the Globe Theatre and the Science Museum, and a day in Stratford-upon-Avon to explore Shakespeare's birthplace.

**Engaging Evening Activities:** Evening activities will encourage socialising, creativity, and fun, ranging from drama games and quizzes to film nights and celebrations.

**Scientific Vocabulary Expansion:** Master the complex terminology used in Biology, Chemistry and Physics through interactive lessons and practical applications.

### **Programme Features:**

**Engaging, Multi-style Learning:** Students will engage in content in a variety of ways, with time spent both in labs and classrooms, as well as through excursions.

**Empowered Expression:** Grow confidence through performance, teamwork, and real-world communication practice.

**Certificate of Completion:** Certified participation of this wonderful STEM/Culture immersion course; a perfect basis for life at NatMatSci and beyond.

## *Behind the Test Tube: A Practical Lab Skills Course at NatMatSci*

Where future chemists master synthesis, analysis, and professional laboratory techniques, for students aged 15-17 (or turning 15 over the summer)

Step into the world of experimental chemistry in this intensive, hands-on summer course designed for aspiring scientists who want to develop genuine laboratory expertise. Participants will carry out advanced chemical experiments and analytical methods – from precision titrations and reflux synthesis to distillation, chromatography, and spectroscopy (IR, colorimetry, and NMR interpretation).

### **Dates:**

Sunday 19th to Sunday  
26th July 2026

### **Step into the Lab, Build Skills, Discover Your Scientific Future:**

#### **Course highlights include:**

##### **Advanced Synthesis and Analysis:**

Carry out organic syntheses involving reflux and purification, analyse products using spectroscopy and chromatography, and learn the theory behind each technique.

##### **Analytical Chemistry Mastery:**

Hone precision skills in quantitative chemistry – including gravimetric and

volumetric analysis – while learning how chemists ensure reliability, accuracy, and reproducibility.

**Problem-Solving and Research:** Work collaboratively to design and refine experiments, troubleshoot procedures, and interpret data using professional chemical reasoning.

**Growing Confidence:** Develop your independence in a laboratory setting while mastering the practical techniques demanded at university and beyond.

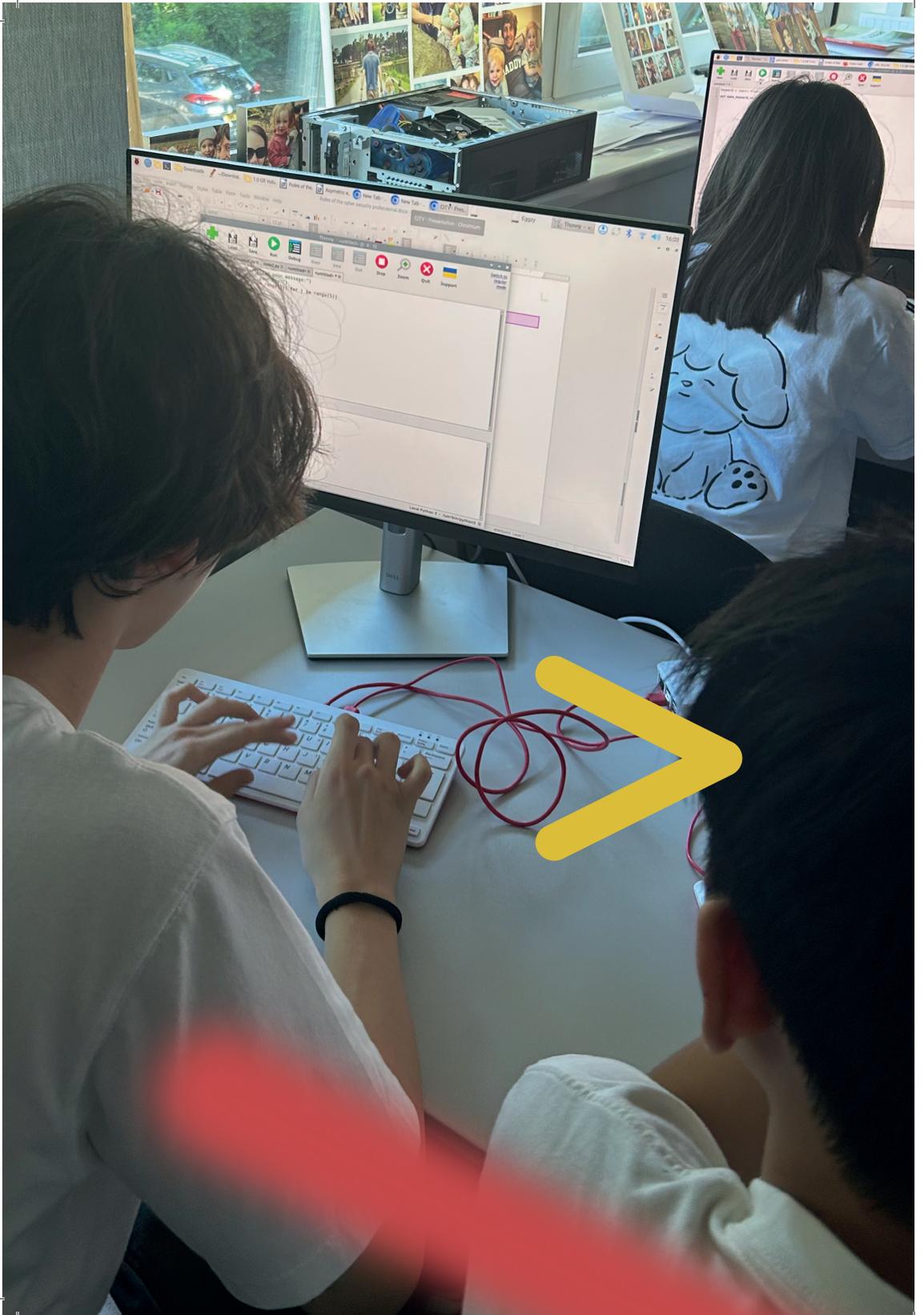
### **Programme Features:**

**Practical Exposure:** Experience authentic laboratory conditions using glassware, apparatus, and analytical equipment typical of a university or research environment.

**Educational Excursion:** A full day excursion to a local university facility is included. Excursion TBC, based on numbers.

**Certificate of Completion:** Receive a NatMatSci certificate recognising your advanced chemistry laboratory skills and problem-solving competence.





# *Code, Create and Conquer: The Science of Cryptography and Computing at NatMatSci*

Dive into coding, cracking, and creating your own robotic world, for students aged 14-17



Join our one-week summer school for a hands-on approach to coding, cryptography, and robotics. Crack secret codes, build smart machines, and tackle tech challenges that put your problem-solving and creativity to the test. The perfect mix of innovation, teamwork, and fun - all while exploring the science shaping our digital future.

## **Dates:**

Sunday 12th to Sunday  
19th July 2026

## **Think Smarter, Code Stronger, Create the Future:**

### **Course highlights include:**

#### **Master the Mechanics of Technology:**

From setting up networks and troubleshooting faults to protecting data from cyber threats, you'll gain practical skills that every tech professional needs.

**Code Like a Creator:** Discover how to write clean, creative code and bring projects to life. You'll explore web design, app development, and even game creation - all while learning the logic behind powerful programming languages.

#### **Build, Design, and Innovate:**

Collaborate with teammates to design a website or app prototype that solves a real-world problem. From brainstorming to building, this group challenge develops both your creativity and technical confidence.

#### **Sharpen Your Problem-Solving Powers:**

Learn to think like a technician - logical, efficient, and inventive. Through interactive workshops and coding tasks, you'll strengthen your analytical skills and learn how to approach complex problems with confidence.

## **Programme Features:**

**Exciting Excursions:** Experience trips to exciting places such as Bletchley Park, The National Museum of Computing, and other educational institutes.

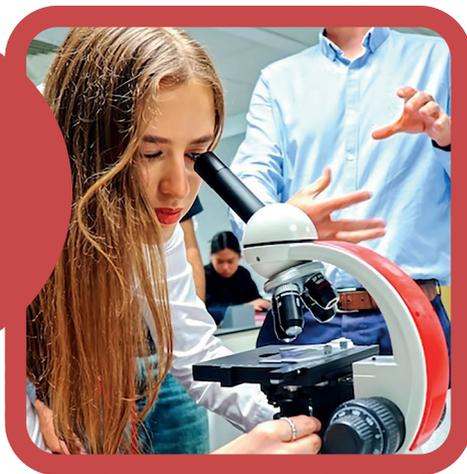
#### **Learn, Connect, and Have Fun:**

Evenings are packed with activities - from coding competitions and quizzes to film nights and sports all leading up to a memorable farewell celebration.

**Certificate of Completion:** Students are awarded a certificate at the end of the week to merit their learning and hard work.

# FEES

## APPLYING FOR A PLACE



It is possible to attend for 1, 2 or 3 weeks taking a combination of the courses on offer.

Length	Course Fee	Course Fee including Boarding
1 week	£1,250	£1,750
2 weeks	£1,750	£3,000
3 weeks	£2,250	£4,250

*All fees are inclusive of VAT.*

**Early Bird:** £250 off if signed up before 28th February 2026

### Optional Add-ons:

Airport Transfer from  
Heathrow £400 return  
Gatwick £450 return  
Birmingham £80 return



## Applying for a Place

Registering for a place on one or more of the NatMatSci Summer programmes is a simple straightforward process:

Whilst there is no formal application process for the STEM summer school, applying for a place requires an interest and passion for STEM, and a drive to continue into A-Level education. Students must also meet the required English levels (see website for details). Places are limited, and courses are expected to be booked up by late Spring.

## Summer School Experience:



- 1 Select Your Programme.** Start by choosing which programme(s) you'd like to attend. Fill out our online registration.
- 2 Once registered online, the College will contact you to complete the initial forms on OpenApply.**
- 3 Pay in full or secure your place by paying a non-refundable £250 deposit.** Please contact us directly if you need to pay by invoice. The payment deadline is 4 weeks before your chosen course.
- 4 Pre-Programme Information.** In the lead up to the course we'll contact you with all the final details for your personalised programme.
- 5 The Summer Programme.** This is the main event, you join us at The National Mathematics and Science College for your selected summer course!
- 6 Post-Programme Follow-up.** After you have attended a programme, you will receive electronic copies of the key resources and content covered and be invited to complete an online assessment to receive your personalised certificate.
- 7 Stay in Touch!** We love to hear what our alumni go on to achieve. Look out for future invitations to share your next steps with us.

**FOR MORE INFORMATION AND TO REGISTER**  
visit our website, <https://summer.natmatsci.ac.uk>  
or contact our admissions office at [summerschool@natmatsci.ac.uk](mailto:summerschool@natmatsci.ac.uk)

circle's circumference??

$$AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$
$$= \sqrt{(r \cos \theta_2 - r \cos \theta_1)^2 + (r \sin \theta_2 - r \sin \theta_1)^2}$$
$$= \sqrt{r^2 - 2r^2 \cos \theta_1 \cos \theta_2 + r^2 - 2r^2 \sin \theta_1 \sin \theta_2}$$
$$= r \sqrt{2 - 2 \cos(\theta_1 - \theta_2)}$$
$$= r \sqrt{4 \sin^2 \left( \frac{\theta_1 - \theta_2}{2} \right)}$$
$$= 2r \left| \sin \left( \frac{\theta_1 - \theta_2}{2} \right) \right|$$
$$\Rightarrow \frac{r\sqrt{2}}{2\pi} \int_0^{2\pi} (1 - \cos \theta)^{1/2} d\theta$$
$$\Rightarrow \frac{r\sqrt{2}}{2\pi} \left[ -2\sqrt{2} \cos \left( \frac{\theta}{2} \right) \right]_0^{2\pi} \Rightarrow \frac{4\sqrt{2} \times r\sqrt{2}}{2\pi} \Rightarrow \frac{4r}{\pi}$$

$\sum_{n=1}^{\infty} \frac{6}{n^2}$   
 $= 6 \zeta(2)$   
 $= \pi^2$

**STAYING  
WITH US**



## ***What to Bring***

Please pack clothing suitable for variable British summer weather. Bring T-shirts/trousers/underwear/pajamas, a warm jumper or sweater, a waterproof jacket, comfortable shoes for daily activities, sports attire for recreational periods.

All necessary academic equipment and materials will be provided, however, please bring your personal device for learning and classroom activities. Basic toiletries, any prescription medications (to be handed in at check-in; over-the-counter medications may be kept with you), and a small amount of pocket money for incidentals are recommended.

Bedding and towels are provided.

## ***Arrival and Orientation***

On arrival day (12th July), please plan to arrive between 12-6pm at the designated check-in area, where our staff will meet you. After settling into your accommodation, we'll have a welcome meeting and orientation tour to introduce key staff and facilities. We encourage you to call home after check-in to confirm your safe arrival.

## ***Accommodation Information***

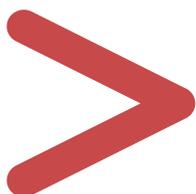
You'll be staying in The Residence at The National Mathematics and Science College campus, with 24-hour staff supervision for your safety and wellbeing.

## ***Building Layout and Room Allocation:***

The building is conveniently located just steps away from the classroom areas. The dining facilities are on the ground floor, making it easy to move between learning spaces and your accommodation. You will be assigned to corridors based on age/gender, with each student having their own room with key card access. Staff members will be positioned on each corridor, available 24/7 to assist with any needs or concerns.

## ***Common Areas:***

The central hub of social activity is The Alchemist's Restaurant which is a ground floor space with tables, sofas, and a large screen. For recreation, the building offers a gaming room with PlayStation and a football table, plus some study and relaxation spaces for quieter moments.



## Laundry Facilities:

A laundry room is available at approximately £3.80 per wash using a payment card system. Bedding and towels will be washed weekly, arranged by The College, or more regularly by request.

## Health and Safety

Your health and safety is our highest priority. If you take prescribed medicine or have allergies, please inform the staff team beforehand so appropriate care can be arranged. This is noted in your forms.

First-aid trained staff are always on duty with multiple first aid kits positioned throughout the building. If you feel unwell during your stay, our team will arrange appropriate medical care, including doctor's appointments if necessary, and in emergencies, an ambulance will be called.

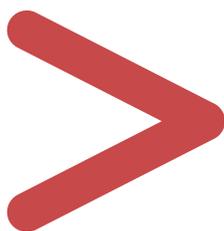
All areas of the campus require authorised key card access. Staff are available 24/7, and someone can always be reached at night for emergencies or concerns through the contact information on your lanyard.

## Anti-Bullying Commitment

We maintain a zero-tolerance policy toward any form of bullying, including cyberbullying. Everyone deserves to feel safe, valued, and respected during their time with us. If you experience or witness any form of bullying or harassment, please speak immediately to any staff member. All reports will be taken seriously and addressed promptly. Serious or repeated bullying may result in the perpetrator being removed from the programme.

## Safeguarding

Our Designated Safeguarding Lead is trained to handle any concerns about safety or welfare. If you ever feel unsafe or need confidential support, you can speak directly with them or any staff member who will connect you with appropriate help.







## ***Code of Conduct***

**We maintain a respectful, inclusive community where everyone feels valued and safe. You're expected to attend all classes and activities punctually, follow staff instructions, and treat others with kindness and respect. We have zero tolerance for bullying, discrimination, or harassment of any kind.**

For your safety, during excursions, you must remain with your assigned group and follow all safety instructions. UK law and school policy strictly prohibit alcohol, drugs, smoking, and vaping on campus. Possession or use of these items may result in immediate expulsion.

All participants must familiarize themselves with fire safety procedures during orientation. In case of a fire alarm, exit the building immediately using designated routes and gather at the assembly point. Never tamper with fire safety equipment or block emergency exits.

The campus facilities are rented specifically for this programme, and students are responsible for respecting all property. Any damages caused to rooms, common areas, or equipment will be charged to the responsible student(s), with additional charges applied for significant damage.

Electronic devices may be used during free time and for educational purposes during designated sessions, but should be switched off during workshops unless instructed otherwise.

Photography should respect others' privacy, and posting images of other participants on social media requires their consent.

We also ask that you respect quiet hours and curfew times (typically between 10-11pm) to keep noise down at night.



***STUDENT  
SUPPORT AND  
WELFARE***

# Student Support and Welfare

## Key Personnel & Support Team

Our dedicated staff are here to help with any concerns, big or small:



Vice Principal and  
Summer School  
Lead:  
**Dr Penny Robotham**



Head of  
Preparation for  
Medicine:  
**Tom Pitt**



Head of Boarding  
and Designated  
Safeguarding Lead:  
**Charlie Turner**



Summer EAL Lead:  
**Lesley Livingstone**



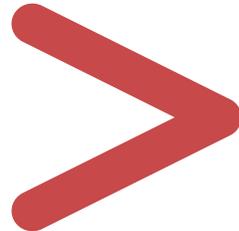
Head of Computer  
Science:  
**Adam Depledge**



Vice Principal  
(Academic and  
Technology):  
**Martyn Colliver**



Principal:  
**Dr Andy Kemp**



Remember, **no concern is too small**. Whether you're feeling homesick, confused about the schedule, having trouble, or just need someone to talk to, our staff are here to help.

*Thank you for joining our Summer Programme. We can't wait to welcome you on 12th July and make this an unforgettable learning experience.*

***Safe travels, and see you soon!***



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Westwood Way  
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