



ST ANDREWS INTERNATIONAL SCHOOL
BANGKOK

A NORD ANGLIA EDUCATION SCHOOL



Massachusetts
Institute of
Technology

THE MIT-NORD ANGLIA STEAM PROGRAMME



HELPING YOUR CHILD INVENT THE FUTURE

Succeeding in the 21st century means learning how to think, not what to think. The Massachusetts Institute of Technology (MIT)-Nord Anglia STEAM programme is designed to prepare students for our rapidly evolving world. Through hands-on, interdisciplinary learning of STEAM subjects (science, technology, engineering, art and maths), we equip our students with the skills, attitudes and behaviours to thrive.

SCIENCE

TECHNOLOGY

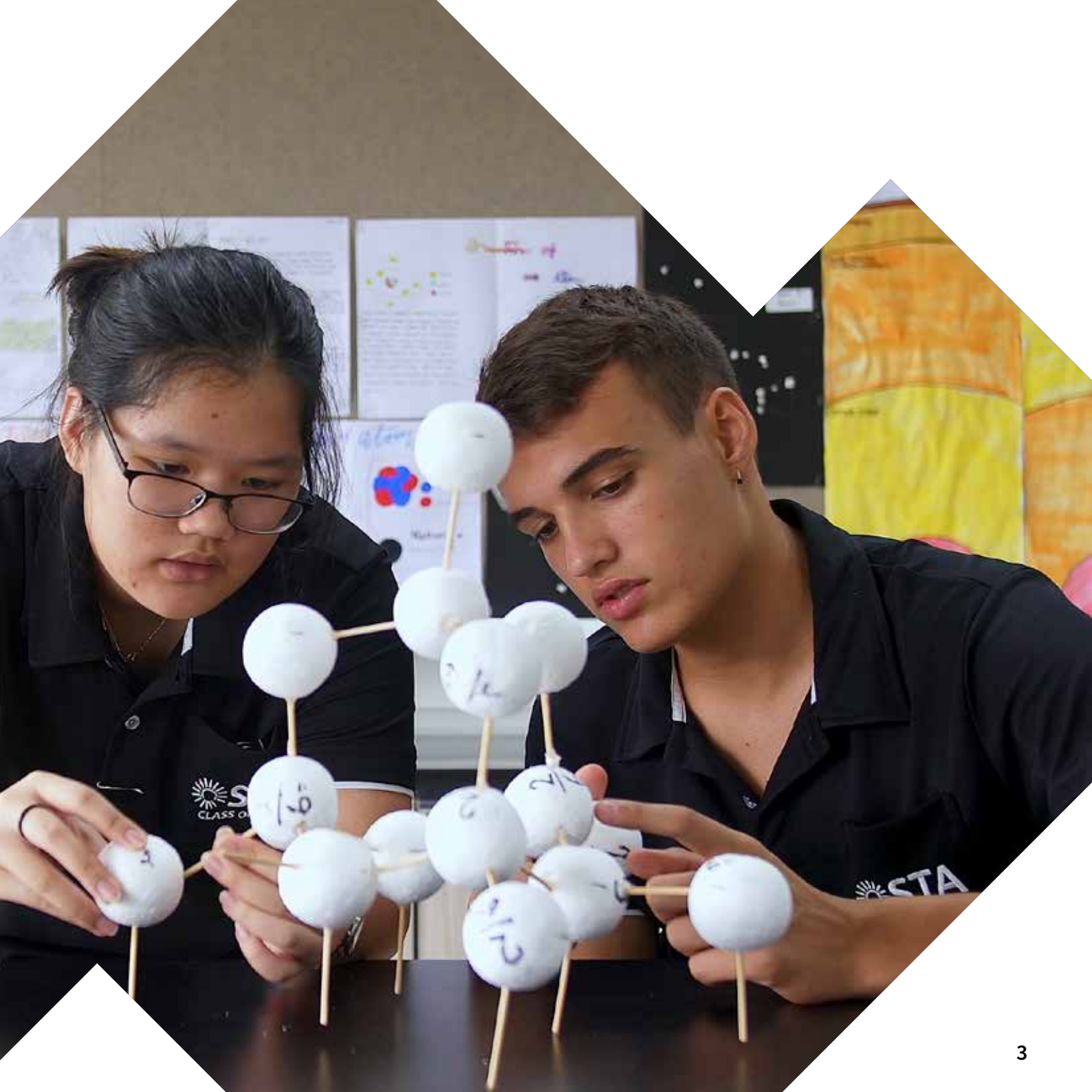
ENGINEERING

ART

MATHS

“Sharing this with students will embolden them to take risks, make mistakes and get messy. It will ensure that they become creative problem solvers as they head into an uncertain future.”

Tom Collins, Head of STEAM, British International School of Chicago, Lincoln Park



WHY STEAM?

STEAM brings together science, technology, engineering, art and maths based on the belief that innovation is often found where subjects intersect. By learning these subjects together, students consider a wider range of perspectives when solving a particular problem. Also whereas traditional learning concentrates on fact-based knowledge around individual subjects, our STEAM programme blends knowledge with the skills, attitudes and behaviours needed to thrive in our dynamic world – flexibility, critical thinking, creativity and communication.

A strong body of evidence also suggests that STEAM has a beneficial impact on learning in other subjects precisely because it helps develop transferrable skills. STEAM learning fuels innovation and creativity, and improves collaboration.



INSPIRING INTERDISCIPLINARY THINKING WITH MIT

Our STEAM programme is guided by MIT's core philosophy of 'Mind and Hand,' a hands-on approach to learning across subjects aimed at developing both knowledge and vital transferrable skills through experimentation, trial and error, and creativity. As a world leader in innovation, MIT's current research and education includes nanotechnology, sustainable energy, space exploration, cancer research, entrepreneurship and artificial intelligence.

This interdisciplinary approach to STEAM exemplifies how we can prepare students to thrive in the real world. It works on the premise that the world is complex and messy, and problems cannot be solved through knowledge of a single subject alone. Challenges are multifaceted and the thinking needed to find a solution must be equally dynamic.

“There was a good variety of activities and new experiences which helped our students to develop social skills, teamwork skills and skills within the STEAM curriculum.”

Melissa Neal, Science Specialist, British International School of Chicago, South Loop

PROGRAMME OVERVIEW

The MIT-Nord Anglia STEAM Programme enables students to experience a university-inspired approach to learning STEAM subjects. Students will learn from MIT researchers, scientists and experts at the forefront of these fields, as well as taking a hands-on approach to problem solving.

1. In-School and online STEAM Challenges
2. NAE STEAM week @ MIT
3. Professional development for teachers

1. IN-SCHOOL AND ONLINE STEAM CHALLENGES

Each year, MIT experts set three real-world, open-ended challenges and other smaller activities for students. The challenges require your child to work in teams to solve issues using ideas which cross disciplines. Designed to test students' problem solving capabilities, refine transferrable skills, develop interdisciplinary approaches, and encourage thinking outside of the box, these challenges are interconnected and span the academic year.

The challenges vary from year-to-year, focusing on themes such as space, nanotechnology, building future cities and genetic engineering. Students will need to find solutions to these challenges with a sense of global mindedness and community awareness in the spirit of MIT's mission.





“Every part of STEAM was experienced and it was both educational and fun.”

Sophia, Year 6 Student, British International School of Chicago, South Loop



2. NAE STEAM WEEK @ MIT

Every Autumn, selected high school students will have the opportunity to explore MIT and immerse themselves in its culture of hands-on problem solving. Your child will interact with leading MIT professors and researchers in activities that expose them to the leading edge of scientific exploration. A series of engaging workshops such as coding, robotics, bioengineering and nanotechnology will guide your child's imagination and help them solidify complex ideas. Campus tours of Harvard University and MIT will also inspire students with a taste of college life in the United States. The weeklong event will be sure to motivate future scientists, engineers and mathematicians in the world of scientific inquiry.

3. PROFESSIONAL DEVELOPMENT FOR TEACHERS

Our STEAM teachers are passionate about the subjects they teach. They will guide your child's learning experience through science, technology, engineering, art and maths, encouraging students to holistically combine concepts and skills from each. In addition to spearheading STEAM learning in schools, these teachers receive ongoing professional development from leading MIT experts to ensure that your child benefits from the most current knowledge of the latest developments in these fields. This unique training opportunity includes a range of workshops, from learning about nuclear energy with plasma physics researchers, to an examination of aeronautics and astronautics. Throughout the year, MIT researchers will advise STEAM teachers to keep them up to date with latest developments and help them to implement the STEAM challenges.

“The trip was amazing. I got to meet so many new people and became closer with the other girls that went on the trip. It was so much fun, seeing MIT, Harvard, Boston and getting to know each other. It was also a once in a lifetime experience, I am so happy that I was able to go.”

Jemma, Year 7 Student, Northbridge International School of Cambodia

DEVELOPING SKILLS TODAY, SO THAT YOUR CHILD CAN SUCCEED TOMORROW

65% of students starting school today, in 20 years will work in a job that doesn't yet exist. We are dedicated to equipping our students with the skills required for them to flourish in the classroom today and the workplace of the future.

Working closely with MIT, we have developed our STEAM curriculum to focus and nurture the key skills that they will require for success. We call these our learner ambitions and we use these to monitor how well we are doing at developing our students.

IGNITE CURIOSITY

We urge our students to question how and why things work the way they do. By searching for connections and relationships in the world, your child can start to face the unknown with confidence. Applying knowledge, skills and imagination helps them look beyond the ordinary to develop creative ways of expressing, thinking through and solving problems.

ENCOURAGE INGENUITY AND INNOVATION

Students are encouraged to approach problems from a range of perspectives, identities and roles, incorporating skills and theories from different subjects. This helps them think of traditional subject boundaries not as barriers to solving a problem, but as opportunities to find new solutions.

SOLVE COMPLEX CHALLENGES

A key focus is developing practical, hands-on and exploratory approaches. Our students learn and work together to tackle real world problems, creating solutions that make a meaningful impact.



“At MIT, we focus on inventing the future. We push past the edges of human understanding. We make new ways of seeing, and we see new ways of making.”

L. Rafael Reif, MIT President

ABOUT MIT

The mission of the Massachusetts Institute of Technology (MIT) is to advance knowledge and educate students in science, technology and other areas of scholarship that will best serve the world in the 21st century. Founded in 1861, MIT is a community of hands-on problem solvers with a passion for fundamental science and eager to make the world a better place. That spirit continues to guide how the university educates students on campus and around the world.

MIT's interdisciplinary exploration has fuelled many scientific breakthroughs and technological advances including major contributions to the Human Genome Project, the creation of GPS, and the pioneer of 3D printing.

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