

Cambridge Academy for Science and Technology

The best in everyone™

Part of United Learning



Prospectus

Year 9 & 10 Entry



CONTENTS

What does Cambridge Academy for Science and Technology offer?	1
The Year 9-11 Curriculum	3
Challenge Projects with Industrial Partners	8
Education with Character	11
Career Guidance	13
Student Destinations	15
Student Wellbeing	17
Special Educational Needs and Disability	19
Applying For A Place	20
CAST is a part of United Learning	21
CAST is a University Technical College	23



WHAT DOES CAMBRIDGE ACADEMY FOR SCIENCE AND TECHNOLOGY OFFER?

CAST is an inspiring, specialist science academy, for young people aged 13-19. The college offers a programme of GCSE, A level and T level courses along with a unique opportunity to work with nearby business organisations involved in science, engineering and technology.

Situated in the heart of Cambridge's Biomedical Campus, the college is surrounded by world-leading academic and commercial organisations which sponsor, support and contribute to the life and work of the college

Students work in state-of-the-art laboratories and facilities, learning in innovative and exciting ways, supported by CAST's unique partnerships with business. CAST therefore gives its students a head start into their future careers.

The academy's curriculum is focused on pathways into different career sectors. So, whether students want to pursue Life Sciences, STEM (Science, Technology Engineering & Maths) or more general 'Applied Sciences', we guide them into the subjects and experiences which will support their career plans.

Business employees lead college Challenge projects. These engage and stretch all students for one day a week, every week, introducing them to real and relevant research and work. This provides every learner with a portfolio of experiences and attributes that are highly prized by universities and employers alike.

CAST Sixth Form is a high performing, firmly established sixth form with a strong track record of both academic excellence and student progress. With students from many different schools both national and international, the sixth form has a vibrant atmosphere with a wealth of opportunities, while at the same time being small enough to ensure our students are all known and treated as individuals. If you choose to join us, we can help you achieve the highest possible academic outcomes through a combination of outstanding teaching, our unique position as an academy for science and technology and the close support needed to thrive in a more independent environment.

CAST is a United Learning school and also supported by the Baker Dearing Trust as a University Technical College (UTC).



“

During my time at CAST I have felt well supported, inspired and motivated to do my best and get the best results I can

- Erin, Year 11

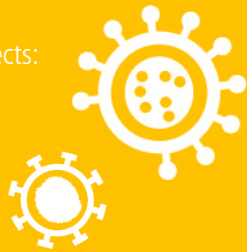
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THE YEAR 9-11 CURRICULUM

Our aim in Year 9 is to excite students in the scope and range of STEM subjects. We offer a comprehensive KS3 curriculum which covers the main points of the national curriculum. This ensures all our students have both the skills and knowledge to be successful when they transition into KS4 and onto future STEM careers when they graduate from CAST.

In Year 9, students study 9 different subjects:

- English
- Maths
- Biology
- Chemistry
- Physics
- Computer Science
- IT (Information Technology)
- Geography
- PE (statutory – not formally assessed)
- Challenge



*Lessons are very clear and easy to understand –
teachers are always ready to help.*
- Mya, Year 9

In Year 10 and 11, all students take nine GCSE subjects. Seven are core and taken by all students:

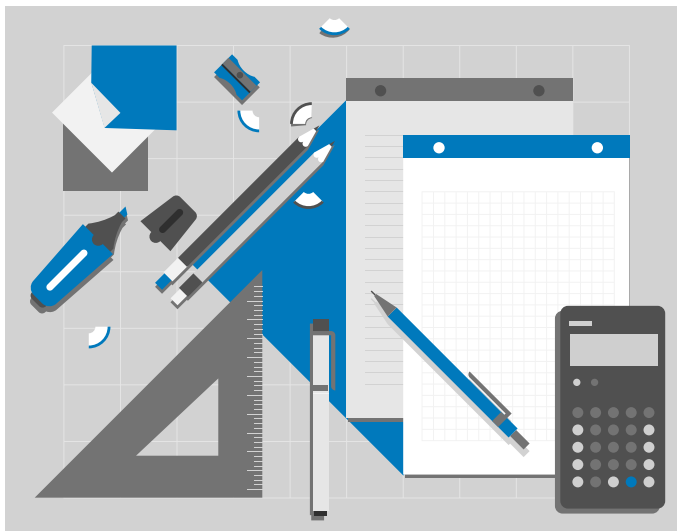
- English Literature
- English Language
- Maths
- Statistics
- Biology
- Chemistry
- Physics



Students also take two option subjects from Computer Science, IT, Health and Social Care (HSC), Geography, Psychology and Design, Engineer Construct (DEC).

In addition, students take PE lessons and spend most of one day in 'Challenge' lessons.

In the Sixth Form, students choose from either an A level or T level programme. Whichever of the two qualification programmes a student chooses, they will also spend a day completing Challenge Projects (these include completion of the Extended Project Qualification) and Core Maths (unless taking A level Maths).



Year 9

English
Maths
Biology
Chemistry
Physics
Geography
Computer Science
IT

Year 10/11 Core GCSEs

English Language
English Literature
Maths
Statistics
Biology
Chemistry
Physics

Year 10/11 Options - Two subjects from

Computer Science
Design, Engineer, Construction
(DEC)
Geography
Health & Social Care
IT
Psychology

PE

• Tutor Time

• Challenge

• Wider Curriculum



Pupils are well prepared for careers in science, technology and computing.
- Ofsted



These are some of the employers involved with the 'Challenge Projects'



CHALLENGE PROJECTS WITH INDUSTRIAL PARTNERS

Being a good scientist is more than just knowing about the subject, it is being able to do it. That does not mean just repeat the experiments of the past but being able to design and perform your own experiments using modern techniques and technology. Through years 9-11 students engage in Challenge projects, these are extended STEM based projects developed and delivered in close collaboration with partners in industry, health care and academia in association with Cambridge Academy for Science and Technology (CAST). All projects have a clear 'challenge' that students must overcome and some form of industry matched outcome at the end.

Teaching strategies may include seminars/masterclasses, practical activities, teaching activities, independent work, and student presentations. Most projects will involve a range of activities. Whether the activities are led by partners or CAST staff will be decided in advance. Whoever is running the activity CAST staff retain responsibility for behaviour, safety and safeguarding.

The role of the teacher is to act as a mentor/critical friend helping students to develop their own ideas and understanding, help students to remain on task and to provide feedback.

Through Challenge Projects students develop a range of knowledge and skills including:

- A practical understanding of science
- Practical science skills
- An underpinning of curriculum teaching
- Transferable skills such as teamwork, leadership, and literacy
- Gain careers guidance

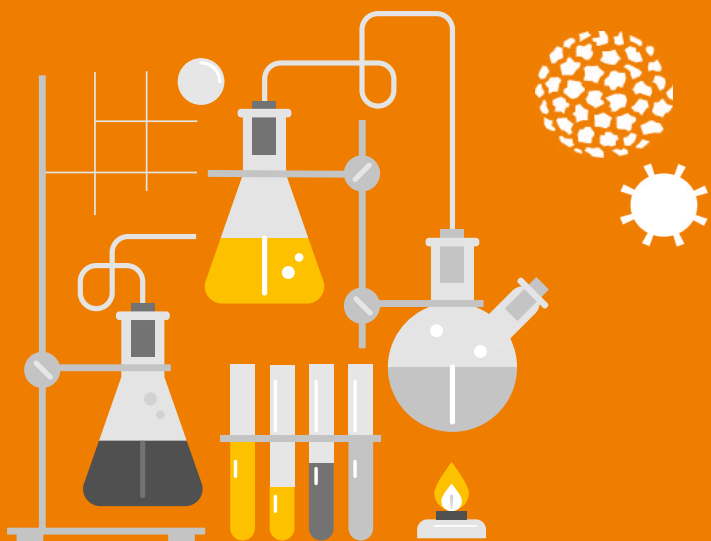
Where possible, Challenge Projects comply with externally verified awards and certificates, such as the Baker Award, with students completing self, peer and teacher led evaluations. Students also keep track of the skills that they have learnt through competency checklists and project evaluation forms in their Portfolio of Achievement.

The year 9 programme focusses primarily on teaching students how science is done and developing their practical skills.

The Key Stage 4 (year 10 and 11) programme involves students working through a number of set projects covering a wide variety of different areas of science. The projects focus on developing students' project-based learning, presentations, teamwork, and practical skills. Students often have a choice of the projects and subject areas that they will work in. Examples of some of the projects include: developing a science week activity to teach members of the public about drug development (with AstraZeneca); designing a hydropower station (with Mott MacDonald); creating an animation; plastic recycling; carrying out an environmental impact assessment for the Cambridge South Railway Station (with Mott MacDonald); architectural design (with Class of Your Own); and looking at the use of animals in research (with Cambridge University).

In addition to the skills the students develop through the project, they also really support the students in gaining self-confidence.

In Years 12 and 13 students select from a wide range of projects covering the sciences and engineering. These allow students to personalise their education and gain the skills required to support future career ambitions. All Cambridge Academy for Science and Technology students take part in the Baker Award.



I love the environment at CAST. It's calm but with a sense of purpose. Staff are very supportive and go out of their way to help us be the best we can be.

- Amelia, Year 10

Pupils in all year groups enjoy taking part in different projects, such as on the uses of forensic science, as part of the 'Challenge' curriculum. They learn how to work in teams, and to research, plan and present information, often to academics and employers.

- Ofsted

EDUCATION WITH CHARACTER

Wider Curriculum (Personal, social, health and economic education (PSHE) and Social, moral, spiritual and cultural education (SMSC))

We are incredibly proud to deliver an Education with Character; an education which challenges, inspires and excites our students and prepares them for the ups and downs of life.

Schools and colleges have a number of functions, one of the most important of which is ensuring that students are able to look after themselves and ready to take an active part in society (be that at a local, national or global level) when they leave. The world is a very exciting place with vast numbers of opportunities. Each one of us will find our own way through life, we will each be excited, interested, upset or appalled by different things. For some of us personal things maybe most important to us, for others it may be working with others, or even causing change at an international level that satisfies us.

Whatever our own personal motivators we all need to have access to basic information, we need to know how to do certain things or access help when we need it. We also need to be aware of what is important to other people so that we can understand their views and when necessary, engage in meaningful discussion, be that with our own friends or family, or wider afield.

The Wider Curriculum is delivered both by our own staff and by external experts through a series of Wider Curriculum Days (six in years 9 and 10; and 4 in year 11). The course covers relationships and sex education, personal safety, decision making, personal finance, health, politics, religion and getting help. Student learning in these topics is assessed at the end of each year. In addition to the Wider Curriculum Days students also cover some of these areas in assemblies, in tutor time, Challenge or lessons. In addition to the taught lessons students also have access to a Teams group which signposts them to further help and support in all the topics covered. Pastoral support within the College also provides more personalised help and support if required.

Extra-Curricular

At CAST we create an environment where students can grow and develop as people, nurturing interests that are wider than the formal curriculum. We run many trips and offer a busy programme of extra-curricular clubs, many of which are with the other secondary schools in the United Learning Cambridge Cluster (Coleridge Community College, Parkside Community College and Trumpington Community College).





CAREER GUIDANCE



Cambridge is contributing to the UK's economic development, and this is driven by the large number of very successful science and technology companies in the region. There are over 1,500 companies in the Cambridge Technology Cluster, employing over 53,000 people and generating over £12 billion a year (and that is before you consider science and technology jobs in academia and healthcare!).

Progression is at the centre of all that we do at Cambridge Academy for Science and Technology. We want every one of our students to have the best possible chance of succeeding in their chosen career path. Therefore, we expect each student to achieve their best in their academic studies, 'Challenge Project' work and in the many other opportunities that we provide.

To support students in progressing to their chosen careers we provide a bespoke careers guidance programme facilitated by staff that are passionate about students achieving their ambitions. Each student receives personalised guidance in developing CV writing skills, interview technique, sixth form and apprenticeship applications. To support students in progressing to their chosen careers we provide a week's work experience for all of our year 10 students.

Because our students meet so many employers they learn about a wide range of careers and develop the skills and confidence to conduct themselves in a professional environment. Involving employers at the heart of our education enables students to build professional networks and opens doors and work experience opportunities that are not always available elsewhere.

- In year 9 students start to look at their own strengths and also the jobs around the Cambridge area and beyond.
- In year 10 we take students through the process of applying for a job. The students have workshops on how to write a CV and covering letter, after which they produce their own CV. They then sit down with an external expert to receive personalised feedback on their CV. They also have a mock interview and feedback, again from an external expert. Having learnt how to apply for a job, students apply for, and complete a week's work experience.
- In year 11 we focus on supporting students in applying for the next stage of their education, be that sixth form, further education, an apprenticeship, or job with training. However, before that starts students attend careers carousels to get them thinking where they want to be in 2+ years' time ensuring that they are making educated decisions about the next steps in their education.

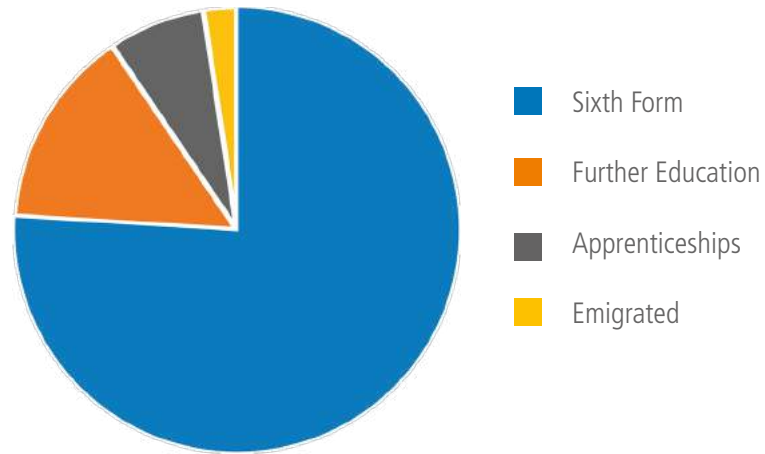
In addition to the core guidance outlined above, all students receive at least one 1:1 guidance meeting with a career advisor in Key Stage 4. They also receive education in managing money, employment rights, trades unions and human resources through the Wider Curriculum, and employability skills through Challenge.

Throughout their time at the College students build up a Portfolio of Achievement that brings together their academic, employability, careers and personal skills into a document that they can use to support them achieve their career aspirations in the future.



STUDENT DESTINATIONS

At Cambridge Academy for Science and Technology our goal is that all of our students progress onto further or higher education, training or employment. You can see the destinations of our Year 11 students below. The largest proportion of year 11 students' progress onto local sixth forms, the majority of these remaining at CAST.



The majority of year 13 students progress onto university, the vast majority studying STEM courses. Each year we have students who achieve places at the UK's top universities, including Cambridge, Oxford and Russell Group Universities. We also regularly have students achieving sought after Higher Apprenticeship places in a wide range of fields.



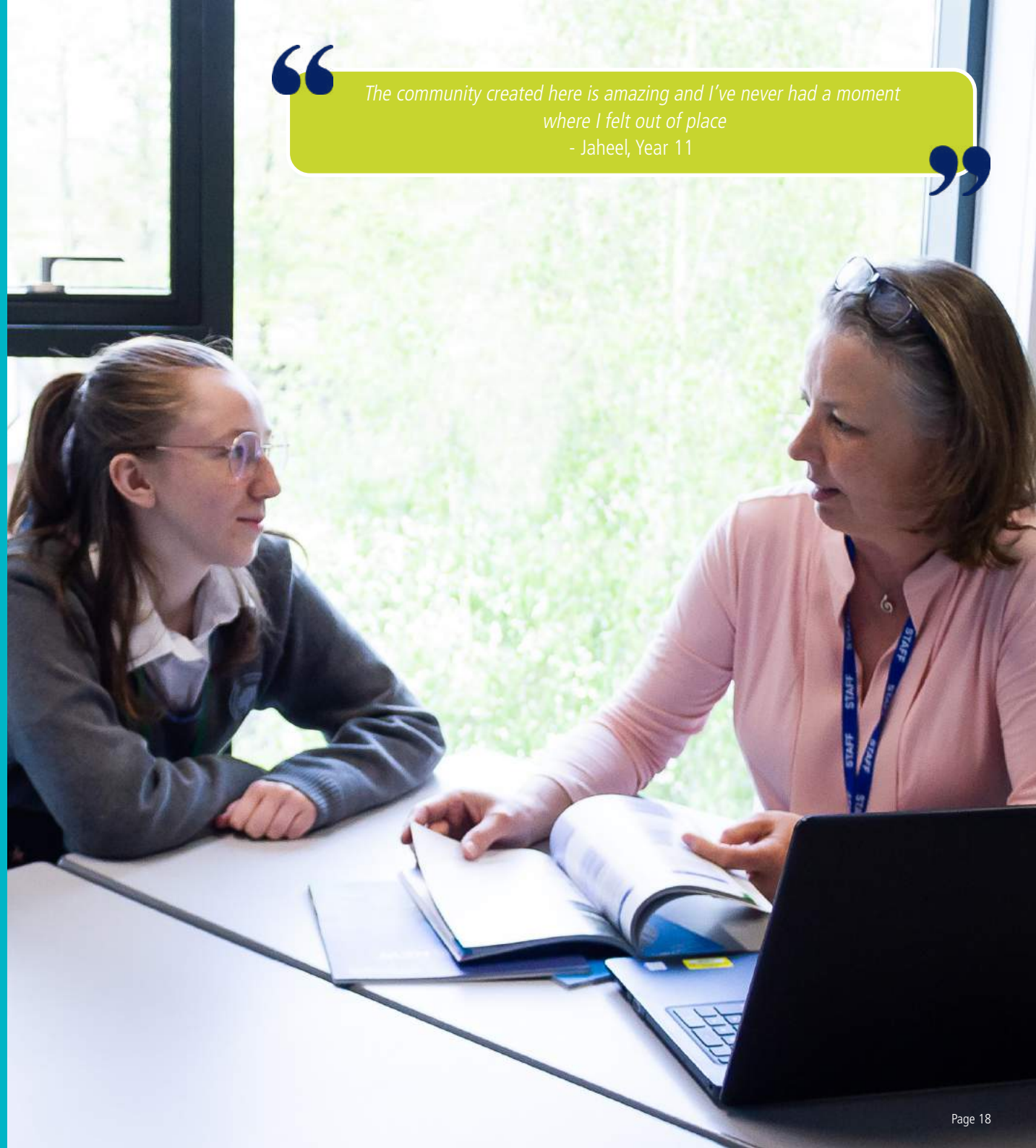
Work Experience week has helped me to understand what it is like to work in the field of medicine. This will be great for my CV.
- Niharika, Year 10

STUDENT WELLBEING

As well as ensuring our students succeed in exams, we aim to develop our values of respect, responsibility and resilience. We want students to try things they cannot do, to persist in the face of difficulty and to become resilient in overcoming obstacles.

With this in mind, we provide a breadth of opportunities and experiences which seek to help our students become confident, well-rounded and ambitious young adults. As part of this, each student is a member of a tutor group, where they begin their school day every day. During tutor time they will participate in activities such as the reading programme and assemblies, which are part of our Wider Curriculum offer.

The tutor is the main point of contact for students and parents if they are experiencing any problems in school. If extra support is required tutors can refer to our experienced pastoral team led by a Head of Year/Key Stage.



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The community created here is amazing and I've never had a moment where I felt out of place
- Jaheel, Year 11

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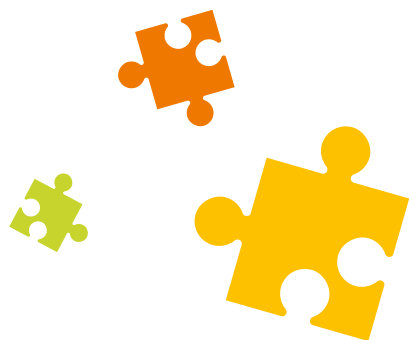
SPECIAL EDUCATIONAL NEEDS AND DISABILITY

Students identified with SEND (Special Educational Needs and Disabilities) that need support over and above that which is normally available to students in the classroom through high quality teaching and differentiation, are termed 'SEND Support'. Students with additional SEND needs that are effectively supported within the classroom and require no additional intervention will continue to be monitored on the Additional Needs register. Parents will be informed if their child or young person is being monitored for SEND.

Special Educational Needs are grouped into **4 main categories of need**;

- **Communication and interaction** (e.g.: Autism, Aspergers or speech and language needs)
- **Cognition and learning** (e.g.: Moderate and Severe learning difficulties, Profound and Multiple learning difficulties, and specific needs such as dyslexia, dyspraxia and dyscalculia)
- **Social, emotional and mental health difficulties** (e.g.: Mental health difficulties such as anxiety and depression, or ADD, ADHD or attachment disorder)
- **Sensory and/or physical** (e.g.: Disabilities that hinders or prevents them from using the facilities normally provided, for example: Visual Impairment, Hearing Impairment, a Multi-sensory impairment, or specific physical disability)

Our dedicated SEND staff develop individual support plans with students and their families to ensure that classroom teachers are informed of the best teaching approaches. Specific support structures for those with local authority education and health care plans for high level needs are thoughtfully designed and delivered.



APPLYING FOR A PLACE

Students wishing to join the college in Year 9 or 10, should complete an application form through Applicaa, available on our website. Applications for both years will be open from 1st October.



For more information regarding admission to our school please look at our website: cambridgeast.org.uk/admissions/applying-for-year-9-or-10

Email: admissions@CambridgeAST.org.uk
Or telephone: 01223 650393

Students from anywhere in the region can apply. Places are not limited to those living in Cambridgeshire, the main catchment area is the area within a 35-mile straight line radius of Cambridge Academy for Science and Technology.

CAST IS PART OF UNITED LEARNING

United Learning is a group of schools which aims to provide excellent education to children and young people across the country.

We seek to improve the life chances of all the children and young people we serve and make it our mission to bring out the best in everyone - students, staff, parents and the wider community. We are uniquely united across both the state and the independent sectors; we make learning and improvement our focus. Together, we are one of the country's leading education providers, currently educating over 60,000 students and employing over 8,000 members of staff including over 4,000 teachers.

We provide a broad education, which prepares young people to progress in learning and to make a success of their lives. We focus sharply on the evidence of what makes it more likely that young people will progress and succeed, apply that to our practice and continue to learn and develop our schools. We make it a priority to provide teachers with excellent professional support and development, so that every child receives an excellent experience.

Through being a group, we can offer more to both staff and young people than any single school could offer alone. The growing range of outstanding group-wide activities that we can provide will mean that more young people will have truly exceptional and inspiring experiences. Already, we believe that our group contains the most developed relationships and practical interaction between independent and state schools in the country, creating benefits for all the schools involved.

United Learning Ethos and Values

Our approach is underpinned by a sense of moral purpose and commitment to doing what is right for children and young people, supporting colleagues to achieve excellence and acting with integrity in all our dealings within and beyond the organisation, in the interests of young people everywhere.

We summarise this ethos as the best in everyone. This ethos underpins our core values:

- **Ambition** - to achieve the best for ourselves and others
- **Confidence** - to have the courage of our convictions and to take risks in the right cause
- **Creativity** - to imagine possibilities and make them real
- **Respect** - of ourselves and others in all that we do
- **Enthusiasm** - to seek opportunity, find what is good and pursue talents and interests
- **Determination** - to overcome obstacles and reach success

As a single organisation, we seek to bring together the best of independent and state sectors, respecting both traditions and learning from each. We believe that each of our schools is and should be distinctive - each is committed to developing its own distinctive strengths and identity while sharing our core values as institutions which promote service, compassion and generosity. This ethos is our expression of our Christian roots, in schools which are fully inclusive and both welcome and respect students and staff of all faiths and none.



CAST IS A UNIVERSITY TECHNICAL COLLEGE

What is a UTC?

University Technical Colleges (UTCs) are government-funded schools with a STEM (Science, Technology, Engineering and Maths) focus. They provide a unique and relevant approach to education which addresses the changing needs of students and employers in the 21st Century. Established by companies and universities in areas of high demand for talent, UTCs provide sought-after technical qualifications and experience and benefit from industry standard equipment and specialist staff to provide students with the skills valued by employers.

The UTC Mission

Our mission is to provide young people with a relevant education in a fast-changing world and provide employers with the skilled workforce needed for UK industry to thrive. We offer young people the education they need today to equip them for tomorrow's careers.

About UTCs

UTCs are a national family of almost 50 state-funded schools that offer a distinctively different educational choice from other schools. They offer a secondary-age education for Key Stage 4 and Key Stage 5 (usually age 14-18) with some starting earlier at Key Stage 3.

UTCs are more than just a school. As well as providing a strong grounding in the core subjects of English, Maths and Science, each UTC has one or more technical specialism linked to their local industry partners. The curriculum provides a blend of academic and technical learning, with balance appropriate to each Key Stage. Programmes of study demonstrate high academic and technical ambition for all pupils, building the vital employability skills, personal values and professional behaviours required by UTC leavers for rapid progression into the UTC's target technical sector. UTCs invest in young people's enthusiasm and aptitude for science, maths and technology, and in doing so accelerate their progression to a career in a technical field. In turn this progression will feed the talent pipeline into UTCs' target technical sectors.

Baker Dearing Educational Trust University Technical Colleges®

Baker Dearing Educational Trust was founded by Lord Baker and Lord Dearing in 2009 to promote the concept of University Technical Colleges ("UTCs"). It is a small, flexible charity that sits at the centre of the UTC network and focuses on promoting and supporting new and existing UTCs.



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SCAN ME



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