



Clifton High School

co-educational nursery school to sixth form



Design Technology and STEM Technician - Candidate Brief



The Diamond Edge Model



Realising Individual Brilliance



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An Introduction

Clifton High School is a forward-looking school set in beautiful surroundings in the heart of Clifton. We are a mid-sized, all-through, independent school of 600 pupils, educating boys and girls from 3-18 years. 'Realising Individual Brilliance' is central to our approach at Clifton High. We believe each child has unique talents and our aim is to nurture and celebrate the brilliance of all. Our approach to education is distinctive in that on transition into the Senior School, boys and girls are taught separately in core subjects. Research has shown, and our experience has borne out, that this gives our pupils the best environment in which to learn. At the same time our boys and girls benefit from having social interaction on a day-to-day basis which is crucial for their personal, social and emotional development. We call this the Diamond Edge Model of education.

Clifton High School is known for its strong pastoral and family ethos. Principally we are a school for parents who want their child's emotional and personal development to be given the same level of importance as their academic achievements. Parents comment on the excellent relationships between staff and pupils - relaxed but always respectful. The rapport, encouragement and support available to every single child, pupil and student create an atmosphere where children and young people can develop happily and progress successfully.

Academic success is extremely important to us at Clifton High School and we have a selective admissions policy. Typically, our students receive excellent results, and year on year the majority go on to secure their first choice of university. There is a firm belief, however, that there is more to school life than just good grades and we put as much emphasis on our pupils' development as on their achievement. Our pupils and young people want to extend themselves beyond the classroom to acquire new skills and develop character traits which will equip them for life. We support our boys and girls wholeheartedly as they embrace with conviction and enthusiasm the rich extra-curricular opportunities available to them. As a school, we believe that the privilege of excellent education brings with it responsibility and we send young people out into the world who are ready to make a real and positive contribution to society.

Four 'Houses' named after the School's founders, Percival, Pears, Wollaston and Winkworth, offer community structure across all ages. The majority of teaching is on one site with facilities including music technology and ICT suites, dance and theatre studio and hall with the latest audio-visual technology and, most recently, a new dedicated STEM room. The School has two senior computer laboratories and a junior computer room. Teaching rooms are equipped with interactive whiteboards and in many rooms, the latest interactive televisions and projectors. There are bespoke resources for learning and for play, including an environmental pond, eco garden, vegetable beds, outdoor classroom, fire-pit and mud kitchen. On-site sports facilities include swimming pool, climbing wall and gymnasium, strength and conditioning room, and outdoor multi use games area. At our nearby sports ground, Coombe Dingle, which is shared in partnership with the University of Bristol, there are international standard pitches, tracks and courts.



The Diamond Edge Model



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The Diamond Edge Model

Clifton High was the first school in the South West and is the only school in Bristol to follow the Diamond Edge Model of Education. Issues relating to gender and education have been debated for many years and it is widely accepted that boys and girls learn better in single-sex groups for certain subjects. It is also clear that young people benefit from interacting with both genders at all stages of their education and development. The Diamond Edge Model is where boys and girls are taught together until Year 6, then in Years 7-9 are taught separately in subjects where this is most beneficial and together in other subjects where mixed work is productive, before coming back together for Years 10-13 to study their chosen examination subjects for GCSE and A level. We believe that this offers the best of all worlds both socially and academically, allowing boys and girls to thrive and achieve their full potential.

Nursery Pre- School to Year 6

Our Nursery Pre-School currently has one class of children. The 'Hive' offers 45 weeks pre-school teaching provision between the hours of 8am-6pm. There are two or three classes in all other year groups from Reception to Year 6. The curriculum is informed, but not constrained by the National Curriculum and the school chooses to enrich rather than accelerate learning. We are proactive in providing children with plentiful opportunities for self-discovery and make the most of the talented teaching from right across the School. Children from Nursery School to Year 6 benefit from specialist teaching and facilities in our sports, science, art, design technology, music, languages and enhanced learning departments. Children in Years 5 and 6 are also taught by specialist mathematics teachers. A STEAM room is located within the Nursery Pre-School—The 'Hive'.

Years 7-9

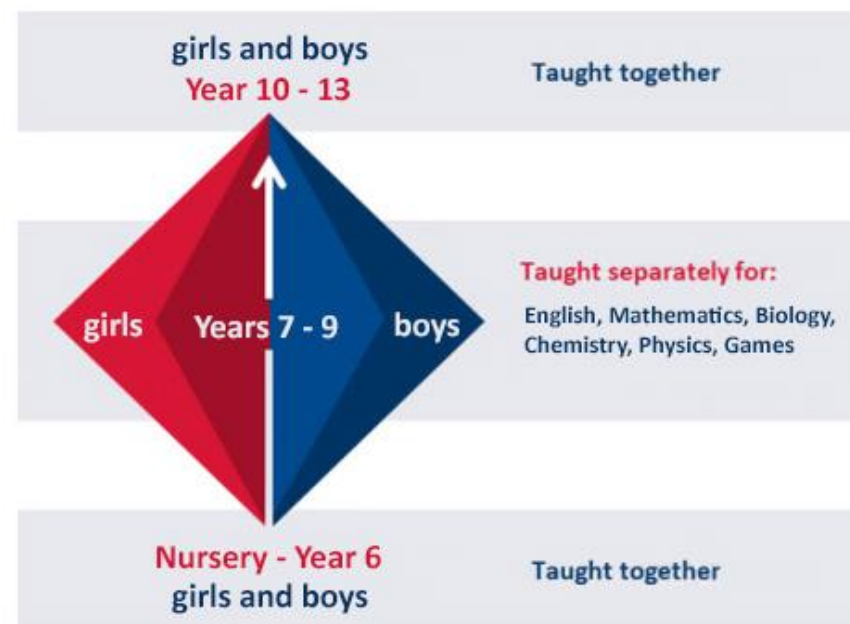
Clifton High School is now well established in its delivery of the Diamond Edge Model of education. This model has proved to be highly popular amongst pupils and their parents, offering single-sex teaching when it is most beneficial, together with opportunities to interact socially amongst pupils and their parents.

Years 10-11: GCSE

Our pupils achieve superb examination results. A broad curriculum, small class sizes and excellent teaching are instrumental in this. At GCSE, pupils are encouraged to take nine subjects, including the separate sciences. They also have a comprehensive Life Skills and Competencies programme.

Sixth Form

Our Sixth Form is a centre of excellence within the School. Academic performance is high, both in terms of students achieving outstanding grades but also in terms of those who exceed expectations and perform better than predicted. We offer a flexible and broad curriculum with courses running subject to demand; students may also complete an EPQ and have access to a full extra-curricular programme. All students follow the School's bespoke 'Futures and Skills Programme'; the support Clifton High students receive in terms of their UCAS applications is second to none. Typically, over 80% of students achieve their first choice of university





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Extra-Curricular and Co-Curricular

There are over 100 weekly extra-curricular clubs at Clifton High School ranging from Young Contrarians, Astronomy and Animation to Fencing, Drama and Taekwondo. The School actively encourages pupils to partake in activities to ensure a range of skills are being developed and individual talents are nurtured. The School welcomes many specialist coaches and has developed unique partnerships with outside sporting associations which provide our pupils with elite coaching and player pathways into participation up to international standard. Pupil performance in music and drama is exceptional. There are a wide range of musical ensembles to choose from and an annual school theatre production and school concert. The Junior School performs regularly in the Shakespeare Schools Festival.

International Pupils and Students

Clifton High School welcomes international pupils and students and operates a host-family boarding scheme for those students who are 16 or over. Bristol is home to large French-owned companies and, as such, has a growing population of French professionals. Clifton High School has met this need and is the only school in the South West that operates FECP, allowing French pupils to follow the French and English curriculum concurrently. Additional support is given from a well-structured English as an Additional Language (EAL) Department.

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The School Ethos and Aims

Our Ethos

We aim to produce young people with the ability to think independently, who have a strong belief in themselves, confidence to pursue their ambitions and the resilience, flexibility and adaptability to succeed whatever life presents.

Our Aim

At Clifton High School, our aims are based around five key areas that operate within the Culture of Safety:

- Teaching and Learning
- Standards and Expectations
- Self-development and Adaptability
- Communication

What do we have to offer you?

- Committed and supportive staff
- Motivated children with a desire to learn
- A drive to change and be better
- A culture of high ambition and excellent pastoral care throughout the school
- A history of embedded excellent best practice
- A creative and inspiring ethos and school values that our children and team carry for life
- Strategic, committed and supportive leaders
- Beautiful grounds and facilities enabling an outdoor and broad curriculum for our pupils





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INFORMATION ACCOUNTABILITES AND DESCRIPTION OF POST

JOB TITLE:	DESIGN TECHNOLOGY AND STEM TECHNICIAN
DEPARTMENT:	BUSINESS SUPPORT
REPORTS TO:	DEPUTY HEADS
1.	<p>GENERAL QUALITIES</p> <p>The Design Technology and STEM Technician will assist all teaching staff in providing pupils at Clifton High School with a relevant and effective Design and Technology and Science experience and ensure high levels of achievement. She or he will be responsible for the implementation and maintenance of science, design technology, STEM equipment and ICT systems and their use within the department</p> <p>SAFEGUARDING</p> <p>The Clifton High School Design Technology and STEM Technician will be committed to Safeguarding and promoting the welfare of children and young people across this 3-18 School, both in and out of the School when in their charge and care. She or he will also ensure that any volunteers they have engaged to work with the children and young people are also committed to Safeguarding and are fully aware of the School's policies and procedures beforehand.</p>
2.	<p>TERMS AND CONDITIONS SPECIFIC TO THE ROLE OF THE DESIGN TECHNOLOGY AND STEM TECHNICIAN AT CLIFTON HIGH SCHOOL</p> <p>The role is full time 37.5 hours per week.</p> <p>There is a pension scheme for all Business Support and the School complies with the provisions of pension regulations pertaining to auto-enrolment. Staff are also entitled to a two course daily lunch during term time and to refreshments throughout the school day.</p>



3.

MAIN RESPONSIBILITIES:

MAINTENANCE

- Manage the maintenance of equipment in the STEM, STEAM and Design and Technology rooms and repair of resources
- Carry out weekly material and equipment checks across all rooms and maintain a record of all equipment checks
- Construct new and modify existing apparatus
- Store all chemicals and equipment in a safe and secure manner, complying with all necessary regulations
- Maintain and monitor stock control on inventories of chemicals and relevant equipment, keep stock records, receive equipment and materials
- Maintain and monitor consumables in product design and STEM to ensure all pupils are able to access a wide range of materials and processes as part of their Technology provision
- Obtain materials by local purchase.

OPERATIONAL

- Trial practical activities and/or prepare models of prototypes ahead of lessons
- Make up solutions, assemble apparatus and deliver equipment to rooms
- Ensure the availability of suitable materials and equipment
- Help compile orders and obtain costings for materials
- Ensure the availability of suitable materials and equipment suggesting alternatives of sustainable resources
- Carry out daily visual checks of all machinery in all rooms before being used by pupils
- Keep sinks and work tops clean; keep stock rooms and cupboards clean, tidy and in good order
- Contribute to the design, development and maintenance of specialist resources and/or planned projects
- Ensure each teaching area is locked and secure when not in use, and all power is turned off where appropriate.

TECHNICAL

- To be proficient in the use of the full range of equipment within Design, Science and STEM
- Carry out risk assessments for technician activities in STEM, STEAM, Design rooms and laboratories
- Assist the Subject team to ensure a healthy, safe and productive work environment through the routine maintenance and preparation of equipment, work-shops and learning spaces

3.
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- Assist with facilitating the preparation of resources and providing the technical support for practical lessons to ensure that the health and safety standards are maintained and the requirements to support a high quality of teaching and learning are met
- Provide technical support to experienced and trainee teachers including Health and Safety guidance
- Keeping up to date with developments in practical science and Health and Safety requirements
- Carry out Health and Safety checks on STEM, STEAM, Design rooms, laboratories, prep rooms and stores.

TEACHING AND LEARNING ASSISTANT

- Support the development and delivery of manufacturing processes in Design and STEM subjects
- Offer guidance, assistance and support to pupils and teachers on the practical aspects of the curriculum
- Interact with pupils in a supportive way to aid the development of their ability to think and learn
- Provide technical support to staff and pupils during lesson time as required
- Run extracurricular clubs relating to STEM and STEAM
- To support the development and delivery of Computer Aided Design & Manufacture in Design and STEM
- Keeping up to date with schemes of work and specifications
- Prepare materials and equipment for practical lessons
- Assist staff in developing appropriate resources for teaching and learning.

HEALTH AND SAFETY

- Under the direction of the School Curriculum Lead, to ensure that all Health and Safety requirements are met
- Work with colleagues and others to maintain health, safety and welfare within the working environment
- Keep up to date with Health and Safety requirements and with developments in Design and Technology
- Under the overall guidance of the line manager, ensuring that both routine and non-routine checking, cleaning, maintenance, calibration, testing and repairing of equipment is carried out to the required standard
- Ensure the healthy, safe storage and accessibility of equipment and materials
- Ensure the safe treatment and disposal of used materials, including hazardous substances and responding to actual potential hazards
- Ensuring cleanliness in the department, including maintenance of machinery and equipment in accordance with Health and Safety requirements
- Carry out weekly Health and Safety checks on all equipment and machinery and arrange for the regular safety inspections of all machinery and equipment
- Become familiar with Health and Safety issues as they apply to Design and assist Curriculum Lead in the production of Risk and COSHH assessments
- Control and store safely all chemicals, flammables and specialised solutions, ensuring that current Health and Safety, COSHH and ESC regulations are adhered to and maintain all necessary safety signs adjacent to machinery
- Ensure Technician's work areas are kept secure, clean, tidy and free from all hazards
- Help ensure that the classroom environment is a safe environment in which learning and skill development can take place.

4.	<p>GENERAL</p> <ul style="list-style-type: none"> • Contribute whole-heartedly to the organisation and running of enrichment activities and to other aspects of school life, drawing on their own interests and enthusiasms • Uphold the School's code of conduct and its values • Maintain good order and discipline amongst pupils and be active in implementing the School's policies on rewards and sanctions • Attend staff meetings as required • Undertake supervisory duties as required • Assist teaching staff in promoting and raising the profile of Design and STEM within and outside School • Advise staff on practical improvements to teaching areas • Contribute to the overall ethos/work/aims of the School • Assist with administrative duties • Assist staff in the production and updating of displays within the department • Liaise with the Estates Manager if the standard of cleaning falls below an acceptable level. <p>OTHER RESPONSIBILITIES</p> <ul style="list-style-type: none"> • Comply with and assist with the development of policies and procedures relating to child protection, health, safety and security, confidentiality and data protection, reporting all concerns to an appropriate person • Be aware of, support difference, and ensure equal opportunities for all • Establish constructive relationships and communicate with other agencies/professionals • Participate in training and other learning activities and performance development, as required • Recognise own strengths and areas of expertise and use these to advise and support others • Be prepared to undertake the duties of a First Aider.
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The duties and responsibilities highlighted in this Job Description are indicative and may vary over time. Post holders are expected to undertake other duties and responsibilities relevant to the nature, level and scope of the post.



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INFORMATION PERSON SPECIFICATION

JOB TITLE:	DESIGN TECHNOLOGY AND STEM TECHNICIAN		
DEPARTMENT:	BUSINESS SUPPORT		
REPORTS TO:	DEPUTY HEADS		
Aspects	Essential Qualities which are essential to the satisfactory performance of the job and without which an applicant cannot be appointed	Desirable Qualities additional to those described as essential which may enhance your application. This is not an exhaustive list and you may add anything you feel is relevant to your application for the role.	Assess by AF = application form T = Teaching I = Interview
Skills and abilities	<ul style="list-style-type: none">• Excellent interpersonal skills• Ability to communicate effectively, both orally and in writing• High level ICT skills• Ability to prepare materials for the delivery of all design technology subjects, STEM and STEAM• Expertise in Computer Aided Manufacture	<ul style="list-style-type: none">• Ability to create teaching resources that cover the multi disciplinary aspects of STEM/STEAM/Science	AF/T/I
Knowledge	<ul style="list-style-type: none">• Excellent subject knowledge• Good time management and organisational skills• Skill in maintaining equipment	<ul style="list-style-type: none">• Knowledge and understanding of Year 7-9, GCSE and A level curriculum, particularly electronics	AF/T/I



Aspects	Essential Qualities which are essential to the satisfactory performance of the job and without which an applicant cannot be appointed	Desirable Qualities additional to those described as essential which may enhance your application. This is not an exhaustive list and you may add anything you feel is relevant to your application for the role.	Assess by AF = application form T = Task I = Interview
Experience	<ul style="list-style-type: none"> • A background in science, manufacturing, engineering or technology 	<ul style="list-style-type: none"> • Experience of working in an Independent School setting • Previous experience of working in a secondary school 	AF/T/I
Qualifications and Professional Development	<ul style="list-style-type: none"> • Minimum of 5 A*-C GCSE (or equivalent) including English and Mathematics • Training in the use of standard material preparation machinery 	<ul style="list-style-type: none"> • Qualified in First Aid 	AF/T/I
Personal competencies and qualities	<ul style="list-style-type: none"> • Commitment to the Safeguarding of our pupils • Willingness to undertake training as required • Adaptable and flexible • Flexibility to undertake any other responsibilities as many be reasonably required by the Head of School commensurate with this post • A willingness to be involved in the wider life of Clifton High School • Excellent organisational skills and able to show initiative 	<ul style="list-style-type: none"> • Ability to provide support in the manufacture of graphic products • Ability to provide support in product design and manufacture using resistant materials • Ability to provide technical support in the manufacture of electronic products • Ability to assist staff in developing resources • Ability to give effective instruction to individual and small groups of students 	AF/T/I
Attitudes and Outlook	<ul style="list-style-type: none"> • Boundless energy and vision • Ability to work under pressure and a capacity for hard work • Ability to appreciate the needs of the whole school • Positive and proactive approach to continuous improvement • Ability to work as a member of a team 	<ul style="list-style-type: none"> • Willingness to take responsibility for own development 	T/I