

A-Level Design and Technology: a past pupil's view

As an A-Level option Design and Technology (D & T) can in truth only be compared with the sciences; that is mathematics, physics, chemistry and others. This comparison also applies when considering University applications for engineering and science courses. In relation to other subjects at A-Level, D & T is unique in offering a wide area of study to suit individual students whilst remaining within the same syllabus. It can introduce topics, from many other subjects, and join them in a constructive manner. Also to successfully complete practical projects one can often employ knowledge from the other sciences. Though this is not a necessity as skills acquired purely through D & T will often suffice.

Perhaps the greatest value of D & T is that it allows one to apply, from other subjects, knowledge that would otherwise have remained as pure theory. This in turn often sparks a reciprocal interest in other subjects. Such a self-perpetuating effect only serves to widen the range of a student's understanding.

As a subject in itself D & T represents one of the most enjoyable, character developing and thought-provoking A-Levels. Indeed its finest aspect is the way that it helps train the mind to develop a logical and directed attitude to problem solving. Such a skill is gradually acquired rather than intuitive yet once mastered it is invaluable and can be applied to problems found in every field. The breadth of study and diversity of the topics covered aid the student's general awareness of resources and possible solutions to any given task. No other subject can reasonably claim to offer such mental development. D & T helps develop mental flexibility by establishing a form of problem analysis and synthesis that is unparalleled at A-Level standard.

In general the A-Level D & T syllabus satisfies the majority of students' requirements to enable practical problems to be solved. In conjunction with this it extends the working knowledge of everyday products and processes. Such an understanding of technological concepts and materials aids project realization. The practical projects, in particular that for the final year, represent true character building processes. Initially when presented with a brief one may shy away from fully examining all aspects of the problem. By learning that only through persistence and thoroughness can really satisfying solutions be achieved one becomes naturally thorough and single-minded in problem solving. One of the other great values of practical projects is the realization that failure must be met with renewed vigour to overcome stubborn problems. Even if major setbacks occur regularly a certain amount of determination is instilled in the student in order to follow through the synthesis of a problem. Finally the satisfaction derived from realizing a viable solution is a truly rewarding feeling that is only really offered in D & T.

There exists at East Barnet School possibly a unique workshop arrangement. It manages to successfully combine metal, wood and plastics

workshops with open plan areas accommodating staff and L6/U6 pupils. This arrangement helps to instigate a pattern of informal communication between staff and student. Also the ability for L6/U6 students to create their own working atmosphere encourages ideas and a lively, friendly environment. This continues throughout the school day and into after school hours. It allows D & T students to contemplate problems and related topics outside general lesson time. Indeed the amount of work done outside of lesson time is phenomenal. Such external work practices have been developed to the extent that a student naturally considers a time span for a project that would be impossible to complete in the time allocated to D & T in the timetable. With the constraints of set periods removed a student is free to attempt and experiment with manufacturing and machining methods, normally thought of as being too time consuming.

A fine aspect of the student-staff relationship is that it inspires confidence and enthusiasm. This is also helped by the unrelenting attitude of the staff in putting in the effort to match the eagerness and diligence of the students. There is a very informal atmosphere between staff and student where informality breeds respect and discipline ensues. Perhaps this is because 6th formers see themselves as being treated as responsible individuals within a free form working environment. To a great extent the staff act as people managing and assisting progress, helping and ensuring that work is satisfactorily completed. In general there is a very strong departmental identity and this aids the level of student participation during after school hours. This extends to students visiting local companies to collect useful scrap materials, generally plastics like acrylic and nylon, and metals like aluminium alloys and brass. Thus by establishing a friendly and unimposing environment the D & T department at East Barnet Upper School thrives, overcoming the problems of lack of facilities and time limits that would otherwise present themselves.