



YOUR  
SCHOOL  
JOURNEY

**YEAR 9**

**Design & Technology**

Within year 9 students opt for two areas of DT they would like to continue via a guided pathway. Students are able to make a greater level of progress in material areas they enjoy due to a greater level of contact time.

### **Food and Nutrition**

Develop your skills— learn how to portion a chicken and use all parts of cuts to make a range of dishes. Preventing food waste and developing technical skills and an understanding of how to work with a budget.

Advance and demonstrate— further your understanding of nutritional profiling and the functions of macro/micronutrients. Design and create dishes based on a person's nutrition needs and constraints.

Multicultural food—investigation into food from around the world, make a range of pastry dishes inspired by a culture of your choice.

Develop your knowledge of shortening and the functions of gluten.

Science investigation into sugar and how much sugar is in our food. What is the function of sugar within our diet?

Get competitive— enter a national competition into food styling, use the skills you have developed through KS3 to make a dish that is presented to the highest possible standard.

### **Engineering**

Develop your skills— introduction into metal fabrication and engineering techniques. Make a tool box that demonstrated your knowledge of product life cycle. Are the materials used recyclable? Have you used renewable resources? Have you made a product that will have longevity and can easily be disassembled for recycling?

Recall and advance— build on the skills and knowledge you have developed in year 7 and 8 to make a product that demonstrates precision.

Aim high— Extend you skills repertoire by making a wood turned handle using the wood lathe.

### **Product Design**

Sustainable furniture design— introduction into furniture design and the importance of using reclaimed materials when designing and making. Which materials are best fit for the job? What are their properties? Creative investigation of finishing techniques and material science.

Design process— build on your design skills to produce a range of advanced, detailed and innovative design ideas. Focus in perspective, typography, design inspiration, form and function.

Investigate, problem solve and test— sample a range of materials and techniques to see which is fit for purpose. Which can you shape, mould and form best? Which do you enjoy working with the most and why? Can you apply prior skills?

How is it done in industry? - work with a local business to produce a functional product. The company will donate all materials and they will judge the outcomes to see which would be commercially viable, which fits the needs of client centred design and which is the most innovative.

Go through the design process— Use google Sketchup to produce a range of CAD images that demonstrate your understanding of client centred design.

### **Extra curricula**

Students will have the opportunity to join DT club at lunchtime once a week. Dt mentors will support in extra curricula activities aimed at year 7 and 8 and will support with fund raising events within school. For those who have opted PD they will have the opportunity to participate in a trip to Yorkshire sculpture park to participate in a 3D sculpture work shop and exhibition tour.

Hyett Education will run a workshop 1/10<sup>th</sup> scale radio control vehicle for those interested in electronics and engineering.

### **Assessment.**

Is completed at 5 points within each term. Why? To check students long-term memory and understanding of technical language and skills. All students can act on personalised next steps and take responsibility for their future progress.

**BUILDING EXCEPTIONAL YOUNG MEN**



YOUR  
SCHOOL  
JOURNEY

YEAR 8

Design & Technology

Students participate in a carousel including art, each rotation consist of 16 lessons.

### Product design:

What's a mechanism? Be inquisitive and create fully functioning mechanisms for a sweet dispenser you have designed and tested.

Client centred design– Problem solving is key to being innovative and creative, analyse a design brief to consider the needs of the product and consider what problems you will need to overcome.

Recall and advance– build on your prior knowledge of CAD to advance your manufacturing skills using 2D design.

DT club– Make a remote control plane (autumn term) learn out systems and control, to develop your making skills.

### Mixed Materials

Know your materials– investigate into materials and their properties; are they a polymer, metal, textiles fibre or wood? What are they used for and why? Are they suitable for your product or do you need to figure out alternatives?

Think like a designer– be inspired by the work of Virgil Abloh, what is he inspired by, what is his design process and why? How can he inspire you?

Model, test and make– develop your problem solving skills by investigating possible design ideas through prototyping. Which design outcome is fit for purpose and why?

Get inspired by a global brand– research in to Nike's innovative sustainable design process and develop your knowledge why product life cycle is important to the success of a brand.

Textiles club, design and make your own T-shirt (summer term). Learn how to use Photoshop and Illustrator to make your own brand or print.

E-textiles- how can electronics and systems be used within clothing? Investigate the use of e-textiles within trainer design to produce a forward thinking product.

### Food :

The big 6– Healthy life styles, how do macro micronutrients impact on the body and what are the health implications associated with a unbalanced diet ? ( Coronary heart disease, obesity, type 2 diabetes, osteoporosis, anaemia and tooth decay)

What food does for your body?- recall and develop your knowledge further of the nutritional benefits of foods, focusing on unrefined sugars, the benefits of vitamin C/A and D and macronutrients.

Demonstrate your cooking skills and make a dish suitable for those with intolerances such as coeliac's and lactose intolerant.

How to cater for those who have a alternative diets due to their moral or religious belief.

Workshop with the vegetarian society– Develop your understanding of alternative proteins and dietary groups.

### Extra Curricula

Become a DT mentor and produce products for poppy day, mentor your peers and help to deliver extra curricula clubs.

### Assessment

Is completed at 4 points throughout each rotation. Why? To check students long term memory and understanding of technical language and skills. All students can act on personalised next steps and take responsibility for their future progress.

BUILDING EXCEPTIONAL YOUNG MEN



YOUR  
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**YEAR 7**

**Design & Technology**

Students participate in a carousel including art, each rotation consist of 16 lessons with the exception of engineering that has 8 lessons.

#### Product design:

Be safe— Introduction to health and safety in the workshop and how to use tools and equipment's.

Think like a designer— Be creative and make a unique and innovative calendar. Developing your quality control skills, understand material properties and the functions of equipment.

How is it done in industry? Develop new skills in Computer Aided Design and use professional software to design and make.

Aspire to be a professional and achieve your laser-cutting badge.

DT club —Design and make 'product in a tin' national competition. (Autumn Term)

#### Mixed materials

Be inspired by the professionals— Research into Mid Century modern design and a range of designers that will inspire your design process.

Have fun— Think out of the box and make a creative product that demonstrates individuality. Sample, test and investigate skills to see which fits your design focus best.

Light bulb moment- develop your knowledge of basic electronics through soldering to make a functional product.

Aspire to be a designer- Design your own T shirt competition (Winter term)

#### Food

How to have a balanced diet- What are the positives and negatives associated with a varied diet.

Bacteria science investigation— what causes food pathogens and what are the conditions needed for bacterial growth?

Design and make your own seasonal dish. Develop an understanding of the moral and social issues associated with food production.

Food club— Taste test and make foods from other cultures. Produce baked goods for charity bake sales. (Spring term)

#### Homework project in the Autumn term.

Sustainable design competition— investigate the keys areas of sustainable design. Produce a innovative product that is made only from recyclable and biodegradable material.

#### Extra Curricula

Trip to Manchester Art gallery to work with in house designers and exhibitions to inspire design process.

#### Assessment.

Is completed at 4 points throughout each rotation Why? To check students long term memory and understanding of technical language and skills. Students can act on personalised next steps and take responsibility for their future progress.

**BUILDING EXCEPTIONAL YOUNG MEN**