

# GREAT BARR

A SPECIALIST SCIENCE COLLEGE



# ACADEMY

IGNITING

POTENTIAL



# TECHNOLOGY



# DEPARTMENT ETHOS

Design Technology at Great Barr School prepares pupils to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages pupils to make positive changes to their quality of life.

The subject encourages pupils to become autonomous and creative problem solvers, both as individuals and as part of a team.



# TECHNOLOGY

## CONTACT US

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## List of Topics Covered

### Year 7

#### Rotation

Pupils will rotate through the subject areas to complete 'design and make' activities in the following areas indicated below:

**Textiles Technology** – Tie Dye – Cushion. Pupils are required to design and make a small cushion using the tie dye procedure. A range of stitching techniques are taught and pupils are required to demonstrate their understanding of the design process.

**Resistant Materials** – After learning about the names, properties and uses of woods, metals, plastics and smart materials, pupils will design and make the pen holder project. Pupils will experience using the bench drill, the Hegner Saw a range of hand tools, the rotary sanding machine and learn about different ways to assemble products.

**Food Technology** – Looking at food safety, nutrition, healthy eating, creating savoury dishes and healthy sweet products.

### Year 8

#### Rotation

**Resistant Materials** – Pupils will gain a deeper understanding of materials, along with more in-depth knowledge of the design process (covering more areas, such as product analysis work). Pupils will then manufacture a product of their own design, gaining experience of a wider range of tools and equipment.

**Food Technology** - Looking at the functions of foods, lifestyle choices, healthy options and food nutrition.

**Textiles Technology** – Monster project. Pupils will combine the skills of tie dye, Applique, hand embroidery and embellishment to create a product based on a monster.

## List of Topics Covered

### Year 9

**Food Technology** – Food Preparation and Nutrition – The aim is to introduce pupils to the key principle of food science, nutrition and a range of cooking skills.

**Resistant Materials** – With the clock and sweet dispenser projects, pupils delve deeper into the design process, designing with the environment in mind and are introduced to using a wider range of machinery, to enable production in quantities.

**Textiles Technology** – Day of the Dead project. Pupils will develop the skills learnt previously to produce a highly decorated textile product of their choice based on the Day of the Dead theme.

### KS4

#### GCSE

#### Design and Technology

The Design and Technology GCSE allows students to study core technical principles, specialist technical principles in one or two areas, and designing & making principles. None exam assessment (coursework) counts for 50% of the qualification, where students will design and manufacture a product, aimed at providing a solution for their individual client's needs. The remaining 50% consists of the end of unit final exam.

Students will cover a broad range of areas, from mechanisms and material properties, to the needs of product users, the safe and correct use of hand tools, power tools and CAD/CAM equipment, and designing to minimise any negative impacts on the environment.

The qualification is useful for progression into many different areas. Not just into the world of building or trades-people, but also a plethora of careers in the world of design and engineering. As the subject incorporates skills and knowledge of maths, English, Science, ICT and Art with practical ability, to complete a project to a successful outcome, it also demonstrates the ability to project manage, which is a desirable trait in any chosen vocation, particularly at management level.

## List of Topics Covered

**KS4**

GCSE

The Science of Food  
Preparation and Nutrition

The Food Preparation Nutrition Curriculum course will be based on four main principles:

- Nutrition
- Food
- Production and Manufacturing
- Cooking and food preparation

Food Preparation and nutrition will focus on equipping students with the knowledge, understanding and skills required to cook and apply the principles of food science, nutrition and healthy eating. The objective is to encourage students to cook healthy foods, enabling them to make informed decisions. Students will also consider a wide range of related learning opportunities and career pathways as well as the development of vital life skills.

**KS4**

Textiles Design

What does the Textiles Design course involve?

- Looking at and responding to the work of artists and designers.
- Experimenting and refining ideas using a range of creative textiles techniques.
- Recording observations using a range of techniques.
- Making a range of final textile pieces e.g. Dresses, bags, wall hangings.
- BEING CREATIVE.

Summary of Assessment

Component 1: 60% of qualification. This comprises of a major practical portfolio and final outcome.