

## Curriculum Overview: Year 7 DT

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p><b>Topic</b>  <u>Inspired by food cultures</u>  <i>How cultures can impact food choices and iterative design.</i></p>	<p><b>Topic</b>  <b>Making Specialism 1</b>  <i>Developing knowledge and practical skills.</i>  <i>Students will complete 4 making specialisms throughout the year in the following topics:</i></p> <ul style="list-style-type: none"> <li>Resistant Materials</li> <li>Textiles</li> <li>Mixed Media (CAD/CAM)</li> <li>Food Preparation and nutrition</li> </ul>	<p><b>Topic</b>  <b>Making specialism 2</b>  <u>Sustainability</u>  <i>How materials, products, and manufacture impact the world</i></p>	<p><b>Topic</b>  <b>Making Specialism 3</b>  <u>Bridges</u>  <i>Forces, stresses, iterative design</i></p>	<p><b>Topic</b>  <b>Making specialism 4</b>  <u>End of year 7 exam</u></p>	<p><b>Topic – now into year 8</b>  <b>Making Specialism 1</b>  <i>Developing knowledge and practical skills.</i>  <i>Students will complete 4 making specialisms throughout the year in the following topics:</i></p> <ul style="list-style-type: none"> <li>Resistant Materials</li> <li>Textiles</li> <li>Mixed Media (CAD/CAM)</li> <li>Food Preparation and nutrition</li> </ul>
<p><b>Links to prior learning</b>  n/A</p> <p><b>Stretch and Challenge Enquiry</b>  Can I use my knowledge of the iterative design process to make high standard adaptations to my prototypes?</p>	<p><b>Links to prior learning</b>  n/a</p> <p><b>Stretch and Challenge Enquiry</b>  Can I use specialist tools and materials safely and correctly to create high-quality outcome?</p>	<p><b>Links to prior learning</b>  What are the 6Rs of sustainability: Recycle, reuse, refuse, reduce, rethink, repair.</p> <p><b>Stretch and Challenge Enquiry</b>  What is the impact of manufacturing on our environment and how can we solve the issues?</p>	<p><b>Links to prior learning</b>  Skills of designing, making and evaluating.</p> <p><b>Stretch and Challenge Enquiry</b>  Can I use my knowledge of forces to create a high quality and structurally stable bridge with an justification of how the forces have impacted my decisions?</p>	<p><b>Links to prior learning</b>  n/a</p> <p><b>Stretch and Challenge Enquiry</b>  Can I use specialist tools and materials safely and correctly to create high-quality outcome?</p>	<p><b>Links to prior learning</b>  Develop skills and knowledge from the year 7 making specialisms.</p> <p><b>Stretch and Challenge Enquiry</b>  Can I use specialist tools and materials safely and correctly to create high-quality outcome?</p>
<b>Equipment Needed</b>		<b>Wider Reading</b>		<b>Family activities</b>	
Pens Pencils Rulers Rubber Crayons Scissors Glue		Websites: <a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a> <a href="https://www.educationquizzes.com/ks3/d-and-t/">https://www.educationquizzes.com/ks3/d-and-t/</a> BBC bitesize DT		Discus with your child, which products in the home have used effective principles of design. This can be appearance and functionality. Encourage your child to explain why they think designers have made certain decisions and if there are any ways they would improve them. Encourage them to practice their drawing, colouring and rendering skills at home.	

## Curriculum Overview: Year 8 DT

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p><b>Topic</b> <b>Making Specialism 2</b></p> <p><u>Futures</u> New and emerging technologies and smart materials</p>	<p><b>Topic</b> <b>Making Specialism 3</b></p> <p><u>Humans in Design</u> Ergonomics and anthropometrics in design</p>	<p><b>Topic</b> <u>Biomimicry</u> How nature inspires design.</p>	<p><b>Topic</b> <b>Making Specialism 4</b></p>	<p><b>Topic</b> End of year 8 exam</p> <p><u>Architecture</u> Technical drawing building scaled models.</p>	<p><b>Topic – now into year 9</b> See next page.</p>
<p><b>Links to prior learning</b> Design skills Working to a brief</p> <p><b>Stretch and Challenge Enquiry</b> What are smart materials and how can they be used effectively?</p>	<p><b>Links to prior learning</b> Design skills Working to a brief Maths</p> <p><b>Stretch and Challenge Enquiry</b> How can ergonomics and anthropometrics be used to respond to user needs?</p>	<p><b>Links to prior learning</b> Reflecting on drawing skills by design using investigation</p> <p><b>Stretch and Challenge Enquiry</b> How can I be inspired by nature to create an innovative design with justifications of my design choices?</p>	<p><b>Links to prior learning</b> Develop skills and knowledge from the year 7 making specialisms.</p> <p><b>Stretch and Challenge Enquiry</b> Can I use specialist tools and materials safely and correctly to create high-quality outcome?</p>	<p><b>Links to prior learning</b> Technical Design skills Working to a brief Maths Modelling card</p> <p><b>Stretch and Challenge Enquiry</b> Can I create an accurate scaled model based on my designs?</p>	<p><b>Links to prior learning</b></p> <p><b>Stretch and Challenge Enquiry</b></p>
<b>Equipment Needed</b>		<b>Wider Reading</b>		<b>Family activities</b>	
<p>Pens Pencils Rulers Rubber Crayons Scissors Glue</p>		<p>Websites: <a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a> <a href="https://www.educationquizzes.com/ks3/d-and-t/">https://www.educationquizzes.com/ks3/d-and-t/</a> BBC bitesize DT</p>		<p>Discuss with your child, which products in the home have used effective principles of design. This can be appearance and functionality. Encourage your child to explain why they think designers have made certain decisions and if there are any ways they would improve them. Encourage them to practice their drawing, colouring and rendering skills at home.</p>	

## Curriculum Overview: Year 9 DT

In year 9 students carousel around 4 different making specialisms:

- Resistant Materials
- Food Preparation and Nutrition
- Mixed Media (CAD/CAM)
- Textiles

### **Topic: Resistant Materials**

In this module, students will:

Develop an understanding of plastics and woods. Investigate a design brief, responding to a clients specification, develop designing and making skills to manufacture a working prototype.

#### **Links to prior learning**

Develop skills and knowledge from year 7 and 8 making specialisms. Using specialised machinery, techniques, and processes for different tasks.

#### **Stretch and Challenge Enquiry**

Can I design and manufacture a high-quality prototype in response to a client's specifications?

### **Topic: Food Preparation and Nutrition**

Students will be able to discuss the principles of nutrition and health, cook a variety of savoury dishes, source seasonality and characteristics of ingredients. They will learn about the Eat well guide and the 5 areas of nutrition they will need to use. They will be able to use knives to demonstrate safe cutting techniques, use a variety of other equipment e.g. hob, oven and grill, food processors, whisks, scales, kettles etc. They will learn about hygiene and safety, the Eatwell guide, understand about different nutrients, where food comes from and about seasonality.

#### **Links to prior learning**

Students will be building upon the practical skills they developed in Y7&8 and be introduced into new skills such as grilling, use of electrical equipment, decorating and layering. They will also build upon knowledge learnt in Y7&8 linked to healthy eating and food provenance, whilst going into more depth about the functions of nutrients in our body.

#### **Stretch and Challenge Enquiry**

Evaluate the long-term consequences of eating an unhealthy diet and how can it significantly impact your health to do so.

### **Topic: Mixed Media (CAD/CAM)**

Students will learn how to apply the Design Cycle to a product design task, and then use it to design and make a product using a variety of tools materials and techniques.

#### **Links to prior learning**

This course will incorporate elements from Science and Maths in order to demonstrate how knowledge from other areas is used in design. Students will be able to use CAD/CAM when designing and making their product.

#### **Stretch and Challenge Enquiry**

Can I apply my knowledge of new and emerging materials to manufacture a high-quality product?

### **Topic: Textiles**

In this topic, students will apply their knowledge to develop a specification to inform the design of an innovative and functional product that meets user needs before communicating their design ideas through a series of drawings, annotations and digital tools.

#### **Links to prior learning**

Develop skills and knowledge from year 7 and 8 making specialisms.

#### **Stretch and Challenge Enquiry**

Can I use innovative techniques to produce a product to meet the needs of a consumer?

### **Equipment Needed**

Pens  
Pencils  
Rulers

### **Wider Reading**

Websites:

- <http://www.technologystudent.com/>
- <http://www.bbc.co.uk/schools/gcsebite>

### **Family activities**

Discuss with your child, which products in the home have used effective principles of design. This can be appearance and functionality. Encourage your child to explain why they think designers have made certain

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