

SUBJECT D&T KS3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Years 7	Area of Study: Design & Make a Desk Tidy for a member of staff at Holmer Green School	Area of Study: Design & Make a Desk Tidy for a member of staff at Holmer Green School	Area of Study: Design & Make a Desk Tidy for a member of staff at Holmer Green School home	Area of Study: This will be a repeat of Autumn 1 – 3 due to the rotation	Area of Study:	Area of Study:
	Content: Research as a team to discover needs of the client / user & important dimensions. Look at the work of others to inspire their designs. in the Desk Tidy & design a range of ideas using oblique drawing techniques & modelling	Content: Research as a team to discover needs of the client / user & important dimensions. Look at the work of others to inspire their designs. in the Desk Tidy & design a range of ideas using oblique drawing techniques & modelling	Content: Research as a team to discover needs of the client / user & important dimensions. Look at the work of others to inspire their designs. in the Desk Tidy & design a range of ideas using oblique drawing techniques & modelling	Content: .	Content: .	Content:
	Learn how to work safely in the workshop & use a range of tools and equipment to make the desk tidy Also using CAD CAM to create parts of the design	Learn how to work safely in the workshop & use a range of tools and equipment to make the desk tidy Also using CAD CAM to create parts of the design	Learn how to work safely in the workshop & use a range of tools and equipment to make the desk tidy Also using CAD CAM to create parts of the design			
	Understand about the source of timbers & polymers & the impact these	Understand about the source of timbers & polymers & the impact these	Understand about the source of timbers & polymers & the impact these			

	materials have on the environment.	materials have on the environment.	materials have on the environment.			
--	------------------------------------	------------------------------------	------------------------------------	--	--	--

### **Support at home**

BBC Bitesize <a href="https://www.bbc.co.uk/bitesize/examspecs/zby2bdm">https://www.bbc.co.uk/bitesize/examspecs/zby2bdm</a>	Keep E-Book up to date
	Ensure all pages in the E book are completed.
Assessments: Low stakes ongoing assessment in all lessons. Assessment of design skills & practical skills & understanding of theory work	Careers in the Curriculum: Discuss possible career progression from D&T. Project is set as if working for a client with links to professional practice.



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Years 8	Area of Study: Night Light for an Art Gallery shop	Area of Study: Night Light for an Art Gallery shop	Area of Study: Night Light for an Art Gallery shop	Area of Study: This will be a repeat of Autumn 1 – 3 due to the rotation	Area of Study:	Area of Study:
	<p>Content: Research Artists &amp; use a range of strategies to design a light.</p> <p>Learn how to work safely in the workshop &amp; use a range of tools and equipment to make the night light. Including cutting wood joints for the base and soldering the components. Also using CAD Cam to create parts of the design</p> <p>Understand about the categories of timbers &amp; polymers &amp; the impact these materials have on the environment.</p>	<p>Content: Research Artists &amp; use a range of strategies to design a light.</p> <p>Learn how to work safely in the workshop &amp; use a range of tools and equipment to make the night light. Including cutting wood joints for the base and soldering the components. Also using CAD Cam to create parts of the design</p> <p>Understand about the categories of timbers &amp; polymers &amp; the impact these materials have on the environment.</p>	<p>Content: Research Artists &amp; use a range of strategies to design a light.</p> <p>Learn how to work safely in the workshop &amp; use a range of tools and equipment to make the night light. Including cutting wood joints for the base and soldering the components. Also using CAD Cam to create parts of the design</p> <p>Understand about the categories of timbers &amp; polymers &amp; the impact these materials have on the environment.</p>	<p>Content: .</p>	<p>Content: .</p>	<p>Content:</p>

## **Support at home**

BBC Bitesize	Keep E-Book up to date
<a href="https://www.bbc.co.uk/bitesize/examspecs/zby2bdm">https://www.bbc.co.uk/bitesize/examspecs/zby2bdm</a>	Ensure all pages in the E book are completed.

**Assessments:**

Low stakes ongoing assessment in all lessons. Assessment of design skills & practical skills & understanding of theory work

**Careers in the Curriculum:**

Discuss possible career progression from D&T.  
Project is set as if working for a client with links to professional practice.



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 9</b> DT Specialism	Area of Study: Timbers & Communication of Design Ideas	Area of Study: Timbers & Communication of Design Ideas	Area of Study: Polymers, Design Strategies & Ecological footprint	Area of Study: Context based project – Something to help in the home	Area of Study: Context based project – Something to help in the home	Area of Study: Context based project – Something to help in the home
	Content: Develop use of a wider range of tools and equipment to make a small timber tray.  Learn a range of techniques to communicate your design ideas  Understand about the origins & categories of timbers & the impact they have on the environment	Content: Develop use of a wider range of tools and equipment to make a small timber tray.  Learn a range of techniques to communicate your design ideas  Understand about the origins & categories of timbers & the impact they have on the environment	Content: Develop use of a wider range of tools, vac forming, drape moulding, strip heating & CAD CAM to make a phone / pencil holder  Develop skills using CAD (Techsoft & Tinkercad or Onshape) to be able to laser cut & 3D print.  Understand about the origins & categories of polymers & the ecological & social impact design and manufacture has on society.	Content: Use a range of tools and equipment including CAD CAM to make a small storage item from acrylic  Learn a range of techniques to generate a range of ideas & avoid design fixation  Understand about the origins & categories of metals & the impact they have on the environment	Content: Use a range of tools and equipment including CAD CAM to cast a pewter design.  Use the work of others to inspire your design ideas and how to develop these ideas  Understand about the work of others & how it can inspire your own design ideas as well as a range of design strategies to develop creativity in their designing	Content: Use a range of tools and equipment including CAD CAM to cast a pewter design.  Use the work of others to inspire your design ideas and how to develop these ideas  Understand about commercial processes & how products are manufactured in industry. Pupils to consider what changes would need to be made to their design if it is to be manufactured in higher numbers

BBC Bitesize <a href="https://www.bbc.co.uk/bitesize/examspecs/zby2bdm">https://www.bbc.co.uk/bitesize/examspecs/zby2bdm</a>	Keep E-Book up to date
	Ensure all pages in the E book are completed.
<b>Assessments:</b> Low stakes ongoing assessment in all lessons. Assessment of design skills & practical skills & understanding of theory work. AP3 assessment will include a written assessment of all content covered in the year.	<b>Careers in the Curriculum:</b> Discuss possible career progression from D&T. Links to professional practice within lessons.

SUBJECT D&T KS4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Area of Study: System & Control Design & make a device to encourage young children to brush their teeth for the correct amount of time.	Area of Study: Mechanisms & Zoomorphic Lights	Area of Study: Practice NEA Sec A - C	Area of Study: Practice NEA Sec C - E	Area of Study: Practice NEA Sec E - F	Area of Study: NEA Sec A & B
	<p>Content: Research Clients needs for the project</p> <p>Use user centred design strategies to generate a range of ideas which will then be modelled &amp; developed into a final design.</p> <p>Use a range of tools and equipment including CAD CAM to make a toothbrush timer that encourages young children to brush their teeth. Develop soldering skills to join the components together learn how to programme microcontrollers</p>	<p>Content: Undertake a design challenge as a team which uses mechanisms &amp; systems</p> <p>Understand about mechanical devices</p> <p>-----</p> <p>Use morphic design strategies to generate a range of ideas for a light which will then be modelled &amp; developed into a final design.</p> <p>Use a range of tools and equipment to make a prototype of the light</p> <p>Learn about developments in new</p>	<p>Content: Research a Context to find a problem to solve. Undertake primary &amp; secondary research needed to be able to design a solution to the problem.</p> <p>Using skills learnt create a wide range of design ideas using a wide range of strategies &amp; communication skills.</p> <p>Learn about energy generation &amp; tolerances</p>	<p>Content:</p> <p>Develop a final solution by using a range of techniques such as modelling &amp; drawing. Select the appropriate materials for the product</p> <p>Use a range of tools and equipment including CAD CAM to make the final prototype</p> <p>Learn about scales of production</p>	<p>Content:</p> <p>Use a range of tools and equipment including CAD CAM to make the final prototype.</p> <p>Test and evaluate the final prototype against the specification.</p> <p>Learn about environmental, social &amp; economic challenges of design.</p>	<p>Content:</p> <p>Research a Context supplied by the exam board to find a problem to solve. Undertake all research needed to be able to design a solution to the problem.</p> <p>Write a brief &amp; specification for the project that will be undertaken.</p>

	Understand about systems & control	materials & material properties				
--	------------------------------------	---------------------------------	--	--	--	--

### **Support at home**

BBC Bitesize <a href="https://www.bbc.co.uk/bitesize/examspecs/zby2bdm">https://www.bbc.co.uk/bitesize/examspecs/zby2bdm</a>	Keep E-Book / NEA folder up to date	
	Ensure all pages in the E book or NEA folder are completed.	
<b>Assessments:</b> Low stakes ongoing assessment in all lessons. Assessment of design skills & practical skills & understanding of theory work. AP3 will be based on the practice NEA & a written paper as per the GCSE assessment		<b>Careers in the Curriculum:</b> Discuss possible career progression from D&T. A number of projects are set as if working for a client with links to professional practice.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	Area of Study: NEA Sec C & D	Area of Study: NEA Sec D & E	Area of Study: NEA Sec E & F	Area of Study: Revision	Area of Study: Revision	Area of Study:
	Content:  Create a wide range of design ideas using a wide range of strategies & communication skills.  Develop a final solution by using a range of techniques such as modelling, drawing & CAD.	Content: Develop a final solution by using a range of techniques such as modelling, drawing & CAD.  Use a range of tools and equipment including CAD CAM to make the final prototype .	Content: Use a range of tools and equipment including CAD CAM to make the final prototype.  Test and evaluate the final prototype against the specification.	Content: Revise for written exam .	Content: Revise for written exam	Content:

### **Support at home**

BBC Bitesize <a href="https://www.bbc.co.uk/bitesize/examspecs/zby2bdm">https://www.bbc.co.uk/bitesize/examspecs/zby2bdm</a>	Keep E-Book up to date
	Ensure all pages in the NEA are up to date and interim deadlines are met
<b>Assessments:</b> Only generic feedback can be supplied during the NEA. NEA will be marked and sent to the exam board for moderation. NEA is worth 50% of the final grade Written paper sat in the summer is worth 50% of the final grade.	<b>Careers in the Curriculum:</b> Discuss possible career progression from D&T. NEA is set as if working for a client with links to professional practice.



SUBJECT D&T KS5

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 12	Area of Study: Performance & Characteristics of Polymers	Area of Study: Processing & Working with Polymers	Area of Study: Performance Characteristics of Timbers Processing & working with Timbers	Area of Study: Performance Characteristics of Metals Processing & working with Metals	Area of Study: Composite Smart & Modern Materials	Area of Study: Performance Characteristics of Papers & Boards Processing & working with Papers & Boards
	<p>Content:</p> <p>Use CAD/ CAM to design and make a flat pack IKEA light.</p> <p>Develop maths skills to enable slot together element of the light</p> <p>Understand Performance &amp; Characteristics of Polymers</p>	<p>Content:</p> <p>Use CAD/ CAM to design and make a flat pack IKEA light.</p> <p>Develop maths skills to enable slot together element of the light</p> <p>Understand Processing &amp; Working with Polymers</p>	<p>Content:</p> <p>Undertake a timber based practical project to develop understanding of working with timbers.</p> <p>Understand Performance Characteristics of Timbers &amp; Processing &amp; working with Timbers</p>	<p>Content:</p> <p>Undertake a pewter casting jewellery project to develop understanding of processing metals.</p> <p>Understand Performance Characteristics of Metals &amp; Processing &amp; working with Metals</p>	<p>Content:</p> <p>Undertake a pewter casting jewellery project to develop understanding of processing metals.</p> <p>Understand Composite Smart &amp; Modern Materials</p>	<p>Content:</p> <p>Develop a context to explore from which students will find a problem to solve. Undertake all research needed to be able to design a solution to the problem.</p> <p>Write a brief &amp; specification for the project that will be undertaken.</p> <p>Understand the Performance Characteristics of Papers &amp; Boards &amp; Processing &amp; working with Papers &amp; Boards</p>

### **Support at home**

Polymers, Timbers & Metals	NEA
Support with time management Reading around the subject	Support with time management. Ensuring all interim deadlines are met. Enabling site visits or meetings with client
<b>Assessments:</b> Low stakes ongoing assessment in all lessons. Assessment of design skills & practical skills & understanding of theory work. AP3 will be based on the practice NEA & a written paper as per the GCSE assessment	<b>Careers in the Curriculum:</b> Discuss possible career progression from D&T. NEA is set as if working for a client with links to professional practice.



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Years 13	Area of Study: NEA Sec C & D	Area of Study: NEA Sec D & E	Area of Study: NEA Sec E & F	Area of Study: Revision	Area of Study: Revision	Area of Study:
	Modern Industrial & Commercial practice	Product Design considerations	Product Design and Development	Design methods	Design processes & Responsible Design	
	Content:  Create a wide range of design ideas using a wide range of strategies & communication skills.  Develop a final solution by using a range of techniques such as modelling, drawing & CAD.  Understand Modern Industrial & Commercial practice	Content: Develop a final solution by using a range of techniques such as modelling, drawing & CAD.  Use a range of tools and equipment including CAD CAM to make the final prototype . Understand Product Design considerations	Content: Use a range of tools and equipment including CAD CAM to make the final prototype.  Test and evaluate the final prototype against the specification.  Understand Product Design and Development	Content:  Revise for written exams . Understand Design methods	Content:  Revise for written exams  Understand Design processes & Responsible Design	Content:

## Support at home

NEA	
Support with time management. Ensuring all interim deadlines are met. Enabling site visits or meetings with client	
Assessments: Only generic feedback can be supplied during the NEA. NEA will be marked and sent to the exam board for moderation.	Careers in the Curriculum: Discuss possible career progression from D&T.

NEA is worth 50% of the final grade

Paper 1 Technical Principles 30% of the final grade.

Paper 2 Designing & Making Principles 20% of the final grade.

NEA is set as if working for a client with links to professional practice.