Design & Technology: Graphics

	Autumn	Spring	Summer
Year 10	**Graphics:** **Area of study- Perspective Drawing** **One Point Perspective:** • Drawing Board Skills • Street scene • Logo design • One Point Perspective exam questions **Kitchen Interior Design** • Two Point Perspective: • Construction of Basic Shapes • Cityscape Design • Drawing Board Skills • Tonal shading • Two Point Perspective exam questions **Area of study- Theory Knowledge Content** Production of Topic Mind Maps on: • Papers and Boards	**Graphics:** **Area of study- Exam techniques for drawing Tasks** • Isometric Drawing Exam Questions • Orthographic drawing • Third angle drawing exam questions • Development Net exam questions • 3-D modelling exam question • Rendering 3-D surfaces • Rendering different materials • Colour Wheel **Area of study- Controlled Assessment Practice Project: Games Controller** • Design Timelines- Product development • Analysis of Existing Products (Games Controllers)	**Graphics:** Area of study- Controlled Assessment AQA Exam Board - 50% of final GCSE **Example projects from previous years:** • Solar powered lantern • Outdoor Portable Speaker • Indoor USB powered lamp • Indoor Portable Speaker **Topics covered in Year 10:** • Task analysis of the overall project • Client research & interviews • Research into a design brief; • Ergonomic research • Research into existing products • Developing and writing a design brief and specification • Initial 2D and 3D drawn ideas

	• Manufacturing processes • Materials- Polymers • Materials- Metals • CAD/CAM • Design Strategies • Electronic Systems • Properties of Graphic Materials • New Materials • Textiles **Area of study- The Work of Others: Famous Designers** Focus on Marcel Breuer and Philippe Starck **Area of study- The Work of Others: Famous Designers** Focus on Dyson and Apple **Area of study- Graphical Communication Techniques** **Isometric Drawing:** • Isometric Crating • Isometric Shapes and tonal shading. • Thick & Thin Line Technique • Isometric Based exam questions	• Orthographic Drawing • Anthropometrics and Ergonomics • Data presentation • Design Idea Generation- Freehand sketching/Isometric Drawing • Final Design presentation • Prototype modelling • Development of ideas • Styrofoam Modelling final design • Packaging Design • Record of Manufacture • Evaluation of Final Design proposal	Area of study – mock exam preparation **Theory topics:** • Approaches to designing • Designing products • Energy & mechanisms • Materials & their properties • Tools, equipment & processes • New & emerging technologies

	Area of study- Thermoplastics **Acrylic desk tidy:** • Thermoplastics • Shaping and cutting plastics • Finishing techniques for plastics • Testing & modelling		
Why?	To prepare pupils for the submission of their controlled assessment-50% of their final grade. To equip pupils with the skills they need to follow a technology-based course at college/ in employment/with an apprenticeship	50% of final GCSE to be submitted to exam board (AQA) Develops pupils' skills in researching, designing, making and evaluating and prepare them for a technology-based college course/ apprenticeship.	50% of final GCSE to be submitted to exam board (AQA) Develops pupils' skills in researching, designing, making and evaluating and prepare them for a technology-based college course/ apprenticeship.
How parents / carers can support	Encourage pupils in the completion of homework Tasks Ask pupils questions about the products they are making and skills they have used	Encourage pupils in the completion of homework Tasks Ask pupils questions about the products they are making and skills they have used	Encourage pupils in the completion of homework Tasks Ask pupils questions about the products they are making and skills they have used
Graphics	**Autumn**	**Spring**	**Summer**
Year 11	**Graphics:** Area of study – Controlled assessment 50% of final GCSE **Topics covered in Year 11:** • Completion of design ideas	**Graphics:** Area of study – Controlled assessment 50% of final GCSE **Topics covered in Year 11:** • Analysis of modelling	**Graphics:** Area of study – Final exam preparation 50% of final GCSE **Final exam preparation:** • Approaches to designing

	• Final design chosen • Model/prototype manufacture • **Mock exam preparation:** • Approaches to designing • Designing products • Energy & mechanisms • Materials & their properties • Tools, equipment & processes • New & emerging technologies	• Final product manufacture • Manufacturing photo diary • Evaluation of the final completed product **Mock exam preparation:** • Approaches to designing • Designing products • Energy & mechanisms • Materials & their properties • Tools, equipment & processes • New & emerging technologies	• Designing products • Energy & mechanisms • Materials & their properties • Tools, equipment & processes • New & emerging technologies
Why?	To prepare pupils for the submission of their controlled assessment-50% of their final grade. To equip pupils with the skills they need to follow a technology-based course at college/ in employment/with an apprenticeship	To prepare pupils for the submission of their controlled assessment-50% of their final grade. To equip pupils with the skills they need to follow a technology-based course at college/ in employment/with an apprenticeship	To prepare pupils for their final GCSE examination - 50% of the final grade. To equip pupils with the skills they need to follow a technology-based course at college/ in employment/with an apprenticeship
How parents / carers can support	Encourage pupils in the completion of homework tasks Ask pupils questions about the products they are making and skills they have used	Encourage pupils in the completion of homework tasks Ask pupils questions about the products they are making and skills they have used	Encourage pupils in the completion of examination homework tasks and to complete revision whilst studying at home.