Curriculum Map 2023-24						
Year 10						
Halfterm	Unit title with hyperlink to scheme of work	Unit summary (Mock NEA)	Skills & content covered (In-Depth Knowledge on Papers & Boards)	Skills & content revisited	Summary of formative marking, feedback and student response	Summative assessment schedule, including assessment criteria
Autumn 1	Mock NEA (Encouraging a healthy lifestyle) - Research section, Brief & Specification	Mock NEA: Investigation/Research section: Mind map/ analysis of brief. Product analysis of products using bank of images photographed on Idrive . Mood boards of existing products with annotations. Questionnaire of chosen client.	. The sources, origins, physical and working properties of the material categories or the components and systems, and their ecological and social footprint How wood pulp is made. • The differences between mechanical and chemical wood pulp. • Recycled paper. • How paper is made by hand. • Surface finishes of paper and card. • Commercial manufacture of papers and boards. • The physical and working properties of paper and board: texture, weight, thickness, strength, surface finish, transparency, folding ability and absorbency. Ecological and social footprint: • The impact on the environment. • Greenhouse gases. • Changing society's view on waste, encourage recycling of all materials. • Living in a greener world. • Packaging – is it always needed?	Research techniques / Developing a brief and specification	Progress recorded through use of tracker spreadsheet	Quiz HW set on Teams
Autumn 2	Mock NEA - Encouraging a healthy lifestyle - Initial product designs	Initial designs: students to produce 4 varied designs for their chosen product. The process is repeated for the packaging of the designed product. (pencil sketches &/or isometric drawings for 3D products) Begin to develop logos and typography for product branding.	2. The way in which the selection of materials or components is influenced by a range of factors, such as functional, aesthetic, environmental, availability, cost, social, cultural and ethical.Aesthetic and functional properties of cards and boards. • Advantages and disadvantages of common paper, card and boards for commercial and everyday use: layout paper, tracing paper, copier paper, recycled paper, cartridge paper, mounting board, folding boxboard and corrugated board. • The reasons for use of paper, card and boards in everyday products. • The aesthetic properties of paper, card and boards. • Responsibilities of designers and manufacturers who design using paper card with respect to: • the environment; • working conditions in third world countries, low labour costs and poverty; • exploitation of employees; • recyclability and waste; • biodiversity and deforestation. • Estimating the true costs of a prototype or product	*Sketching and technical drawing skills*	Progress recorded through use of tracker spreadsheet	Quiz HW set on Teams
Spring 1	Mock NEA - Encouraging a healthy lifestyle - development of a final product	Final design is developed from chosen initial design. Refining design ideas into clear plans - orthographic & isometric drawing. Further research into materials. Modelling strategies such as: block modelling with styrofoam, creating packaging nets, laser cut structures logo research page (can also be used for NEA)	3. The impact of forces and stresses on materials and objects and the ways in which materials can be reinforced and stiffened The behaviour of papers and board under forces or stress. Reinforcement of papers and boards by corrugating, folding, gluing. Stiffening papers and boards by increasing thickness,	Design strategies: isomentric drawing / 2 pt perspective / orthographic drawing. Model making	Progress recorded through use of tracker spreadsheet	End of unit test - marked out of 50
Spring 2	Mock NEA - Encouraging a healthy lifestyle - Making of prototype	realisation of developed design work through use of appropriate model techniques, including CA/CAM. Laser cutting, 3D printing, Developing surface Graphics and logos. Final POS net drawn on Illustrator. Surface graphics applied to final	4. Stock forms, types and sizes in order to calculate and determine the quantity of materials or components required Standard sizes of papers and boards. i.e. rolls, A5, A4, A3. • Paper is measured in grams per square metre. • Cardboard is available in different forms with different cores	CAD/CAM, Modelling, addition and wasting processes	Progress recorded through use of tracker spreadsheet	Quiz HW set on Teams
Summer 1	Mock NEA - Encouraging a healthy lifestyle - Evaluation	Making of final product. Evaluation: against spec, 3rd party, final modifications	5. Alternative processes that can be used to manufacture products to different scales of production. Wastage/Addition Advantages and disadvantages of producing single, one off products. • The advantages and disadvantages of producing products in limited quantities (batch production). • The need to produce a number of identical products. • Jigs and devices to control repeat activities. • The advantages and disadvantages of high volume, continuous production. • Issues related to high volume production. • The importance of CAM in modern high volume production. • Pre-press, on-press and the finishing processes used by commercial printers to produce products in batches or mass/high volume. • Pre-press operations: • Grids, registration marks, layout, imposition and colour separation; • On-press operations; • Finishing Processes; • Die cutting, spirit varnishing, and UV varnishing, laminating, embossing, debossing, cropping, folding and binding methods; • Techniques used to produce books, magazines, leaflets, flyers, packages and other printed products.	Making techniques	Progress recorded through use of tracker spreadsheet	Quiz HW set on Teams
Summer 2	NEA - Analysis of Brief/s, Reseach section	NEA briefs analysed. Mind Map, Possible outcomes investigated, Product analysis, Questionnaire, Mood Boards (continued into Y11)	6. Specialist techniques and processes that can be used to shape, fabricate, construct and assemble a high quality prototype, including techniques such as wastage, addition, deforming and reforming, as appropriate to the materials and/or components being used: • Tools and equipment to mark out, hold, cut, shape, drill, form laminates of plastics, papers/boards. • Marking out materials using a range of workshop tools. • Jigs and formers to ensure accuracy as part of the process of drilling, bending, cutting and forming. Deforming/Reforming • Bending plastics. • Vacuum forming. • Laser cutting. • 3D printing. • Press forming / moulding. • Blow moulding. • CAM machines. • 3D Printers. • Score and fold paper and card. • Assembly and components. • Components for a particular purpose. • Material joining - permanent and temporary. • The application of a variety of finishing materials. • Die cutting, spirit varnishing, U.V. varnishing, laminating, embossing, debossing, cropping, folding and binding methods. • The use and importance of product labelling and symbolic images that convey messages.. Appropriate surface treatments and finishes that can be applied for functional and	**Research techniques**	Progress recorded through use of tracker spreadsheet. Mock exam result	Mock Exam: students to sit past paper in exam conditions - Mark Scheme out of 100 NEA Research section - Marked out of 10: •undertaken a comprehensive and effective identification of opportunities for the development of designs within the prescribed context. • undertaken comprehensive, relevant research and investigation, clearly linked to the context and, where appropriate, the work of past/present professionals and companies. • undertaken an effective analysis of information, reflecting the needs, wants and values of clients or potential users. • identified a range of problems/opportunities to clearly inform the development of possible design briefs.