Curriculum Sequencing - Year 11

Year 11 NEA : GCSE

Topics covered:

Specialist technical principles
selection of materials or components
forces and stresses
ecological and social footprint
sources and origins
using and working with materials
stock forms, types and sizes
scales of production
specialist techniques and processes
surface treatments and finishes.
Designing and making principles
investigation, primary and secondary data
environmental, social and economic challenge
the work of others
design strategies
communication of design ideas
prototype development
selection of materials and components
tolerances
material management
specialist tools and equipment
specialist techniques and processes

How it links to what you have studied before:

In ks3 you will have learnt how to design and make products from all specialisms in DT. Now you will independently focus on broadening your knowledge and you can then specialise in one are from the list below:

papers and boards
timber based materials
metal based materials
polymers
textile based materials
electronic and mechanical systems.

How it links to what you will study:

The coursework you produce will make up 50% of your GCSE grade and will be used as part of a portfolio for when you go for jobs or interviews.

Key words:

Industry, enterprise, sustainability, people, culture, society, environment, production techniques and systems, energy generation, fossil fuels, nuclear, renewable, energy storage, modern materials, smart materials, composite, technical textiles, systems approach, input, process, output, mechanical devices, working properties, papers and boards, natural and manufactured, metals and alloys, polymers, textiles, material properties, components forces and stresses, ecological and social footprint, 6Rs, social manufacture, sources and origins, working with materials, modification of properties, shape and forming with cutting

Key skills:

Learning theory to implement into your own design, make and evaluate projects.

demonstrate their understanding that all design and technological activity takes place within contexts that influence the outcomes of design practice
develop realistic design proposals as a result of the exploration of design opportunities and users' needs, wants and values
use imagination, experimentation and combine ideas when designing
develop the skills to critique and refine their own ideas whilst designing and making

abrasion and addition, stock forms, scales of production, production aids, tools equipment processes, commercial processes, quality control, surface treatments and finishes, primary, secondary data user, client, brief, specification, identify needs, economics challenge, work of others, design strategies, development, communication of ideas, prototype development, selection of materials, tolerances, material management, marking out, specialist tools and techniques.	communicate their design ideas and decisions using different media and techniques, as appropriate for different audiences at key points in their designing develop decision making skills, including the planning and organisation of time and resources when managing their own project work develop a broad knowledge of materials, components and technologies and practical skills to develop high quality, imaginative and functional prototypes be ambitious and open to explore and take design risks in order to stretch the development of design proposals, avoiding clichéd or stereotypical responses consider the costs, commercial viability and marketing of products demonstrate safe working practices in design and technology use key design and technology terminology including those related to: designing, innovation and communication; materials and technologies; making, manufacture and production; critiquing, values and ethics.
Assessment focus Designing and generation of ideas Making skills and safety through the practical Evaluation skill Theory through coursework practice NEA	**Revision tips** Use the revision materials on the Google site. https://sites.google.com/worthinghigh.net/design-technology/gcse/theory-lessons
Why we study it: Design and technology provides skills for life and future careers.	
Mastery in this subject: Independent, problem solving, accuracy and excellent finishing.	