Design and Technology Subject Learning Journey

ERDINGTON ACADEMY

ENRICHING LIVES; TRANSFORMING FUTURES

Summer Exam

Revision

Students prepare for the exam using revision and exam practice.

4.4.4.6 Section FPAN: Analysing & Evaluating (20 marks) -Sstudent's use their design brief, specification and customer feedback to evaluate their solution.

4.4.4.5 Section E:Realising design ideas (20 marks) The final prototype is manufactured independently and documented in making diary.

4.4.4.4 Section D: Developing design ideas- Students conduct a range of testing, modeling, sketching and evaluation to develop solution to the design brief.

March Mock Exam

Unit 5 covers one material in depth.

NEA Evaluation

March mock exam

NEA Making

NEA Developing

Unit 4 covers forces, functionality, environmental issues and scales of production.

Unit 6 covers design strategy, communication techniques and the work of others.

On June 1st in Year 10 AQA release the Contextual Challenges.

4.4.4.1 Section A & 4.4.4.2 Section B : Identifying & investigating design possibilities (20 marks)- Students investigate the context of their choice using primary and secondary resources to identify a problem, customer, design brief and write their specification.

NEA Context

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November mock exam

Jaguar Land Rover JLR Pre engineering apprenticeship

NEA Designing

4.4.4.3 Section C: Generating design ideas (20 marks)

Students use a range of modelling techniques including CAM/CAM to develop a final design

Unit 3 covers materials and their properties. The main categories are papers and boards, timbers, polymers, metals and textiles

Unit 2 covers energy, smart, modern and composite materials, systems and mechanisms.

Unit 1 covers Industry and enterprise, sustainability, industry, customers and design decisions.

DT: Small scale storage unit – wood and polymer 'designing and joining techniques/surface finish

DT -G- Food packaging collaboration with FPaN Drawing Skills and presentation -based product mini NEA focus

DT -G: Paper & Board-based product mini NEA focus Ear phones /Food packaging

DT: Ergonomic kitchenware - mini NEA focus

Students complete a mock NEA based upon developing a speaker. 2/3 lessons a week

Using their graphics skills, students create a range of initial ideas and annotate them in detail.

- A is for Aesthetics
- C is for Cost
- C is for Customer
- E is for Environment
- S is for Size
- S is for Safety
- F is for Function
- M is for Material

The prototype is evaluated against the specification and customer feedback

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D&T Product Design Commonwealth Games 2022 Medal

D&T Textiles Wall Hanging Display

An introduction to fabrics and surface decoration through block printing, tie dying, applique and sublimation printing.

D&T- Graphics Fragrance Packaging

Independently, students manufacture their prototype

Designers and work of others investigations

Students learn how to investigate a design context using 5WH, Investigate using primary and secondary research leading to a design specification. ACCESS- FMM

Through a DMA students create a pencil case by developing their understanding of pattern and decorating.

Students learn how to create initial ideas, develop them through evaluating against design specification modeling and then make their final product.

This is an introduction to electronic circuits, components and soldering. Students make a light based upon a design era of their choice.

Systems and Control Steady hand game

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Textiles (Pencil case)

DT –PD Jewellery metal

Graphics- Pop-up cards Paper and board

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An introduction to fabrics and surface decoration through block printing, tie dying, applique and sublimation printing.

Students are taught about metals and how we manufacture with them through casting.

DT –PD Coat Hook Wood and polymer

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Systems and Control Steady hand game

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Textiles Fabric keyring and drinks sleeve

The focus for this unit is understanding Polymers and how to shape and form them.

Through a DMA, students are introduced to timbers, polymers, textiles and paper and boards. They learn about their categories, properties and stock form then how to cut, shape and finish them.

Learning is based around the design and make principles techniques used for communicating ideas - Rendering, 2d and 3d Perspective, Crating

Students will use 2d design v2 to create a key ring or fridge magnet then get it laser cut. They will then create a blister package to hold product.

Graphics Fridge magnet Blister package

Timber Jigsaw puzzle with packaging

Health and safety passport Tools and equipment risk assessment.

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