CURRICULUM PROGRESSION PATHWAYS **SUBJECT: DESIGN AND TECHNOLOGY** **HOD: Mr J Case** **2020/21**	**Quality of Education:** *Curriculum is planned and sequenced so that new **knowledge** and **skills** build on what has been taught before and leads towards a clearly defined end point.* ***Vision:** We aim for our students to meet demands of an ever-changing technological world by building a repertoire of skills and knowledge that encourages, creativity, independence and reflective thinking.*

KS3:

Assessments:
Testing on theory and vocabulary.
Evaluating- peer on peer assessment

Yr7
Project rotation:
Ruler project (acrylic-plastics)
Spinning disc toy (wood)
Graphics Lift off CD cover

Knowledge:
Planning
Timescales
Creative designing
Modelling and prototypes
Materials

Skills:
Wood work
CAD/CAM skills
Technical Drawing skills
Plastic skills
Sander
Pillar drill

Yr8
Project rotation:
Buzzer toy (electronics)
Mirror stand (wood)
Photo frame (plastic & wood)
Clock project (plastic & wood)

Knowledge:
Electronic diagrams (STEM)
Vacuum forming
Independence working on machines
Health and safety

Skills:
Development modelling
Health and safety for electronics
Coding
Line bending
Costing
Tennon saw

Yr9
Project rotation:
Box project (wood)
Balancing toy (wood and metal)
Jewellery project (variety of materials- using prior knowledge)
Mini furniture

Knowledge:
Key joints (6 of these) Assessed
Intricate 2D designing using CAD/CAM
Engraving methods hand or machine
Metals
Design and Technology key designers
Industry

Skills:
Lathe work
Forging
Pewter Casting

KS4 GCSE AQA Design and Technology

Year 10:
AQA Design Technology
Introduction: Written exam: 2 hours
50% of GCSE 50% Practical coursework NEA

Projects: Jewellery (pewter) / Light box / Practise NEA brief.

Knowledge:
New and emerging Technologies
Industry/ Enterprise / Sustainability
Automation - technology push/market pull affects choice. Changing job roles due to technological change.
Culture / Society / Environment /
Production techniques and systems
Critical evaluation of new and emerging technologies informs design decisions
Classification and properties of Materials

Skills: Exam skills
Longer mark question responses
Practising reading and analysing exam questions
Designing and making joints under controlled conditions

Year 11:
Non-exam assessment will contribute towards 50% of the student's overall mark. The NEA project in its entirety should take between 30–35 hours to complete and consist of a working prototype and a concise portfolio of approximately 20 pages of A3 paper, equivalent A4 paper or the digital equivalent

Knowledge:
Designing and making
Electronic and mechanical systems
Wood metals and polymers
Textiles
Paper and board.
Using materials efficiently
Manufacturing
Specifications
Developing and prototypes
Evaluation.

Skills:
Making design strategies
Prototype development
Communication of design ideas - 2d and 3D
Responding to exam criteria/questions
Creating a3 portfolio
Structuring a body of work

<u>Further Education and training, Careers</u>

Vocational qualifications (BTECs, NVQ/SVQs, diplomas)
graphic design, fashion styling, art and design, media, engineering, photography, construction and building, motor vehicle technology and repair

Apprenticeships
product designer, theatre set carpenter, farrier, service technician, civil engineer, plumber, design and draughting technician. model maker

A levels
design and technology, product design (3D), product design (textiles), systems and control technology,

Related subject:
Art, graphic design, media, music technology, computing, maths, physics, photography, sculpture, textiles, engineering, architecture.