

Biddenham International School: DT Curriculum

Throughout key stage 3&4 students learn a range of practical skills that will enable them to make a final GCSE project. They will also learn the design skills to complete the coursework and the theory for the exam. Lessons are largely practical in nature, becoming more theoretical as they progress.

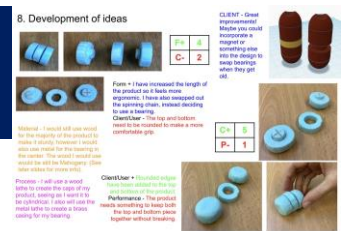
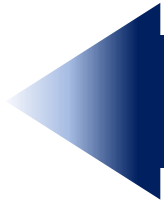


Celebrate an excellent set of GCSE results.



Take your GCSE exams.

NEA
All aspects of the NEA:
Investigate: context, existing products, client, brief and specification
Design: initial ideas, development, modelling, plan of manufacture
Manufacture: quality, accuracy, materials, finish
Evaluate: LCA, evaluation, user review, modifications



EXAM THEORY TOPICS

New and emerging technologies
Energy storage and production
Systems
Smart Materials and composites
Materials: timbers, papers and boards, metals, textiles, electronics
Exam technique

Learn how to answer the DT specific exam questions

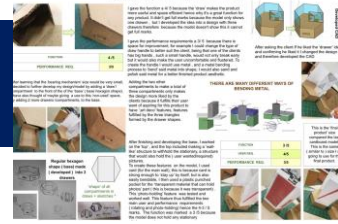
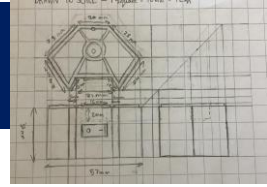
NEA & EXAM TECHNIQUE

Full version of the NEA
Exam question technique
Workshop time to produce models and practical project

Revise for and sit your Y11 mock exams.



YEAR 11



SPEAKER BOXES

Bring all aspects of the practical together, create wooden speaker box, include electronic speaker circuit, turn feet on lathe, use laser cutter for lid

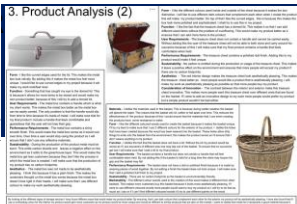
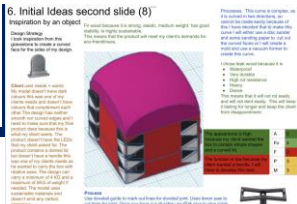
PRACTICE NEA (COURSEWORK)

All aspects of the NEA:
Investigate
Design
Manufacture
Evaluate

Learn how to complete the paperwork for the NEA

TRIP

New Designers Exhibition



Complete your Y10 mock exams to get GCSE ready

Learn how to bring all the practical aspects together in one project

YEAR 10



METAL SKILLS

Marking out
Centre Punching
Drilling
Sawing and Filing
Smoothing
Turning
Heat Treatment

ELECTRONICS

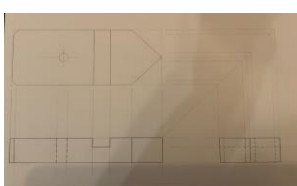
Soldering
Problem Solving
Speaker Circuit
LED circuit



Learn how to solder

WOODEN BOXES

Rebate Joints
Dovetail Joints
Laminating
Vacuum Bag Press
Finishing
Laser Cutter



TRIP

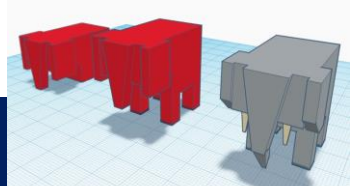
Silverstone Interactive Museum

Learn about technical drawing techniques

GRAPHICAL DRAWING

Rendering
Graphical Isometric
Graphical Orthographic

YEAR 9



Learn about rebate joint, assembly processes for wooden joints

FLOWER HOLDER

Revisit Marking out and Cutting Wood
Rebate Joints
Use of Chisel to pare joints
Sanding End Grain
Use of jigs to increase repeatability



PHOTO FRAME

Vacuum Forming
MDF
Jigs and Formers
Strip Heater
Plastics
Surface Finishes
Processes and Techniques



DESIGN PROJECT

Intro to Tinkercad
Converting and Downloading
3D Printer Demo
Existing Designer Analysis
Sketching from influences
Idea Development
Anthropometrics and Ergonomics
Analysing and Evaluating

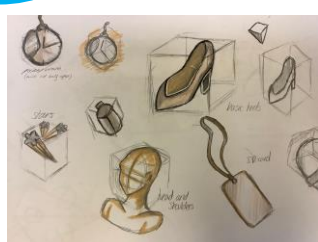
Learn about using CAD to iterate your design

YEAR 8



Learn about tools used to manufacture parts in wood, metal and plastic.

3D SKETCHING
Oblique Sketching, Isometric Sketching, 1pt & 2pt Perspective Sketching, Ellipses, Crating Industrial Design Techniques



Learn about the design process including designing to fit the human body

COAT HOOK - WOOD
Measuring and Marking out, Tenon Saw, Disc Sander, Pillar Drill, Drilling and Countersink holes, Surface Finishes, Properties of wood, Health and Safety
Manufacture Plan

Learn about workshop safety

COAT HOOK - METAL
Marking out Acrylic, Finishing Acrylic, Cross and Draw Filing, Marking out Metal, Use of Hacksaw, Centre Punching, Drilling Metal
Metal Bending Tool
Use of Screws and Screwdriver

Start your DT course

YEAR 7

