

Summer Term

Final Exam

The Non-exam assessment will contribute towards 50% of the students 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.

Non Exam Assessment

Spring Term

The work of others Design strategies Communication of design ideas Prototype development.

Autumn Term

Investigation, primary and secondary data Designing and making principles Surface treatments and finishes Specialist techniques and processes

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Designing and making principles

Summer Term

KS4

Spring Term

Enterprise Forces and stresses Ecological issues Industry Culture

Specialist technical principles

KS4

Production techniques and systems Environment How to shape and form using cutting, abrasion and addition Selection of materials or components Properties of materials

New and emerging technologies

Practical lesson –Cleaning the materials/ Adding a finish
Discussion about finishes : Why are they used
Pupils will discuss why acrylics do not need a finish. What is meant by self finishing

Practical – Final assembly
Final assembly lesson for all aspects of the project to be completed.
Reminder about Quality Control – Modifications that may have occurred need to be noted and justified if they have deviated from the design brief.

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KS4

Plastics

Practical lesson – CAD/CAM
Demo the acrylic line bender and CAD router machine

Practical Lesson– Measuring and marking
Use of rulers – using mm
Using Tri squares
Indicating the waste.
How to mark properly on acrylic and similar materials.

Modelling in Technology / using CAD/CAM
The role of computer modelling and testing.
How will CAD/CAM be used to produce the iPhone holder?

Plastics

Introduction to the project
Acrylic iPhone holder.

Research and materials in Design technology.
The difference between thermoplastics and thermoset plastics

Design brief and Initial ideas.
Discuss the correct method of producing initial ideas:
3D sketches
Colour
Annotation

Plastics

Evaluation
Review the project with the pupils. Class discussion with all the completed projects on view.
Good examples and why. What improvements could others have made?

Practical – Final assembly
Final assembly.
Reminder about Quality Control –

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Metals

Workshop rules / Health and Safety
The importance of Health and Safety

Practical Lesson Measuring and marking
Materials distributed to pupils

Practical Lesson–Cutting tools and techniques.
Correct methods of drilling – stepping up, work piece holding using hand vices and using correct technical terms.

Practical lesson – Cleaning the materials/ Adding a finish
Pupils will clean up their materials using sandpaper, wire wool and metal polish.

Metals

Modelling in Technology / using CAD/CAM
Why do we use models in Technology

Design brief and Initial ideas.
What is a design brief

Research and materials in design technology.
The difference between ferrous metal and non – ferrous metal

Introduction to the project
Pewter and wood key ring fob.

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Practical – Final assembly
Final assembly lesson

Evaluation
Review the project with the pupils

Woods

Applying the design / Adding a finish
Pupils will apply their design using stains and coloured pencils

Practical lesson – CAD/CAM
Demo the Vac forming and CAD router machine

Practical Lesson–Cutting tools and techniques.
Teacher demo on the correct way to use cutting and shaping tools such as saws, drills and files

Practical Lesson– Measuring and marking
Teacher demo on the correct way to mark and measure the material

Woods

Introduction to the project
Hand Held Puzzle using Cad Cam.

Research and materials in Design Technology.
The difference between hardwoods and softwoods.

Design brief and Initial ideas.
What is a design brief and why do we use them in design technology

Modelling in Technology / using CAD/CAM
Why do we use models in Technology

Workshop rules / Health and Safety
The importance of Health and Safety

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OUR CORE VIRTUES



Awakening minds

Achieving dreams

Serving others