The five year curriculum: Design Technology 2022/23

UP HOLLAND HIGH SCHOOL
Dedicated to Excellence

Formal Exam Assessment
50% coursework

Mock Examinations to sample existing knowledge and identify gaps
Exam based theoretical studies
Booster Revision sessions
Present prototype and portfolio for formal assessment
Generate high level prototypes through 3D printing
Refine existing design work showing development following testing
Draw and scale prototype selecting appropriate software
Explore and revise each of the core, specialist and technical principles of Design Technology pre-examination
AQA

Non Exam Assessment (NEA)
50% coursework

Year 11

Begin high quality prototyping selecting appropriate materials
Create a series of designs showing originality
Informing personal design decisions through a design brief
Generate a design specification appropriate to personal project
Market research, consider human factors inc. ergonomics
Express relevant opinion about a range of products
High level analysis and evaluation of products
Evaluate existing products and identify target demographic
Independent study and start of project developing product of own choice
Sample designs and explore feedback.
Draw, measure and mark out component parts
Select appropriate materials
Consider aesthetics: surface finish, texture and colour.
Select appropriate physical and working properties when designing and making
Be able to collect relevant research

DT Course : Applied Design Technology Studies

How we create energy in different ways
Exploration of materials such as Timbers, Polymers, Metals
Generate rotation designs and 3D curves using Google SketchUp
Research designers focused on furniture design
Generate design for mini project exploring furniture design
Furniture mini prototype presentation
Timber based materials (how to cut, drill, chisel, sand and plane)
The theory behind modern electronic systems
The use of smart materials and technologies
Production methods
Impact of industry and enterprise on the modern world
Importance of sustainability
Creating slotting joints using CAD/CAM
Development & assemble of design work using 2D Design & laser cutter
In-depth focus on Timbers processes/uses and techniques
Understand timbers standard components e.g. woodscrews, hinges, KD fittings

Clock Design Project

Year 10

Evaluate success of product
3D CAD generated Prototype construction
Hand made Prototype construction
Physical and mechanical properties relevant to commercial products
Apply accurate cuts and measurements to work
Explore existing products and produce analysis
Create original design influenced by others
Idea generation
Refine existing design work showing development following testing
Understand the properties and uses of Timber based materials
Analyse design process & outcome - Testing
Design development through CAD building 3D shapes and layers
Understand the term target market
Ecological issues in the design & manufacture of products
Enhance original designs using isometric drawing
Create a series of information based graphics
Apply colour and text to a good standard
Create original products for festival using own design and theme
Develop literacy when writing about design
Identify market & demographic

Festival Design
Masterclass – Graphics, Product & 3D Design

Year 10

3D Course

Develop ability to create a personal investigation into existing designers
Papers & boards (flyers/leaflets & card based packaging).
Generate Logo Designs
Create models of architectural stage for festival
Apply accurate cuts and measurements to work
Apply correct terminology and language to design criteria
Analyse design brief exploring existing products
Use language of the expert to plan/evaluate own work
Evaluate success/failure of product through testing
Be able to identify key points to a design brief
Learn about the work of David Carson & Paula Scher
Analyse existing products
3D CAD generated Prototype construction
Design development through CAD building 3D shapes and layers
Evaluate and test design functionality
Develop designs from initial concept sketches

Iterative Design (3D Lamp)

Develop ability to evaluate both own work & peers
Product Testing and identify issues
Design the rules and present using relevant terminology and/or graphics
Understand typography rules and settings
Evaluate process and outcome against the iterative pattern for design
Read a specification and analyse key pointers
Produce detailed design specification

Papers & Boards (Pop Up Cards/Books)

Year 9

Understand how mechanisms work with card
Develop internal and V stand mechanisms
Apply colour and text to a good standard
Create original pop up book pages using own drawings and designs
Understand the term biomimicry giving examples
Design an appropriate space following criteria using CAD to model personal response
Use correct language and terminology to evaluate own work
Evaluate success/failure of product through testing
Be able to identify key points to a design brief
Generate a short original storyboard showing planning
Apply accurate cuts and measurements to work
Apply correct terminology and language to design criteria
Analyse design problems

Timbers (Desk Tidy)

Year 8

Year 7

Learn the basic controls of 2D Design
Draw basic shapes on 2D Design
Create a lap joint in wood
Learn how to cut with a tenor saw
Measure & mark wood for precise cuts
Workshop health & safety
Quality assure product against starting point & initial intentions
Learn how to apply finishes such as sanding and varnishing
Learn to evaluate work in progress
Create a butt lap joint in wood
Learn to cut with a coping saw
Be able to generate ideas through sketching
Learn the names of a variety of tools