Grange Park School

Learning for Life - Personalised Pathways for All

KS5

- Ability to discuss ideas with others
- Use feedback and own evaluation to develop ideas further
- Adapt ideas and record modifications to show and evidence how your work has improved.
- Able to show how you would make your product whilst maintaining safe working practices and highlighting the risks around you and how you will limit these risks by writing a risk assessment.

Make your product Photographic evidence of you making your product at each stage of manufacture. Explain why you selected particular materials, tools and techniques.

Evidence how you maintained a safe working environment. Explain what you learnt and how you became secure, confident and competent in your knowledge of the manufacturing processes that you undertook.

Write a detailed evaluation Consider what you have learnt and identify areas for further development.

- Primary and Secondary Research
- Existing Products
- ACCESSFM
- Drawings/sketching/annotation/colour/shading/parts drawings/dimensioning/modelling and testing

Unit 3: Develop Craft ideas

YEAR 11

Unit 4: Create, present and evaluate final craft item

Make a production plan
Provide a cutting list
Produce a timescale

Keep a record of modifications/changes that took place from the original plan

Pucket Game – Hand tools. Band facer machine, Measuring, marking out finger joints – applying maths. Cutting, filing, painting techniques (undercoat and top coat) Assembling techniques. .

Investigate creative enterprise and employment opportunities

Unit 2: Certificate only

Explore a range of techniques to support craft idea

Explore Craft Resources, including the visual and tactile qualities

To be able to have a good knowledge and understanding of different types of structures and how these can impact on the strength and suitability of product such as benches

Able to write their own specification

Ability to show knowledge and understanding of how to maintain a safe working environment to get self and those around them safe in a workshop.

Unit 1: Use Materials, tools and equipment to develop craft techniques

Construction and/or Floristry NCFE Level 2 (Award or Certificate)

YEAR 10

Natural and Manmade structures/Triangulation

Band facer and Pillar drill

Specifications

Effective use of materials – consideration of wastage

Use appropriate tools and equipment for selected techniques

Visits to wholesale Floristry warehouse Purchasing goods and replenishing stocks experiences.

Health and Safety for the workshop Recap and increase awareness to include a wider range of tools and machines in the workshop. Introduction of soldering and hazards associated with soldering iron and soldering components. Students building on knowledge and expected to work more independently.

Torches made from recycled materials. Electronics – Soldering iron, PCB and various electrical components.

Electronics

CLOCKS
Correctly spacing out numbers. Using ACCESSfm to be able to describe a product in great detail. Technical Vocabulary.

BASIC TYPES OF MOTION
Reciprocating, circulating, Oscillating, Linear.

CAD/CAM

MECHANISMS

MOVEMENT

YEAR 9

HEALTH AND SAFETY

Manufacturing processes, tools/machinery and materials: Plywood/laser ply. Clock Mechanisms.

product Analysis

MECHANICAL TOYS – Explore a range of mechanism and relate to types of motion

Explore the use of 2D design and be introduced to the tools available on the program. Students can go at their own pace and become more advanced users if capable.

To be able to measure and mark out in mm accurately using correct tools. To be able to name tools and spell them correctly.

DESIGNER DOOR WEDGES
Follow a design brief, designing for client.
Creativity – Innovative design.

Introduction to Manufacturing processes, tools/machinery and materials: Workshop, Pillar Drill, Files, Steel rule. Hardwoods and softwoods/Manufactured boards

HEALTH AND SAFETY

The 5R's.
Reuse, Refuse, Reduce, Recycle, Repair.

YEAR 8

RECYCLING

COMPUTER AIDED DESIGN (CAD)

WOODWORK

HEALTH AND SAFETY

HEALTH AND SAFETY for the workshop Recap and increase awareness.

Manufacturing processes, tools and materials: Cutting, shaping, filing – Emery cloth
Melting plastic. Using: Hot iron, Bench hook and coping saw. Round file, Emery cloth. Acrylic Paints

BIRD BOXES
To be able to have a good understanding of recycling. Design and make a bird feeder out of recycled materials. Including the use of soldering iron/melting and Health and Safety.

To be knowledgeable and skillful about FILING and CUTTING techniques using a range of files, different graded glass papers and experience of using a coping saw.

To understand basic Health and Safety for the workshop. Hand tools/machinery/emergency stop switches.

DOODLERS:
Using their knowledge of electrical circuits to design and create a more complex electrical product.

YEAR 7

To understand how to use sliders, pivots and folds to create paper-based mechanisms.

POP-UP BOOK:
Exploring and creating different types of mechanisms.

STUFFED TOYS:
Exploring different stitches and creating templates

MECHANICAL SYSTEMS

TEXTILES

ELECTRICAL SYSTEMS

Following a design brief to make a pop up book, neatly and with focus on accuracy.

To understand that it is easier to finish simpler designs to a high standard.

Measuring, marking and cutting fabric accurately and independently.

To know when there is a break in a series circuit, all components turn off.

Making a functional series circuit, incorporating a motor.

YEAR 6

STEADY HAND GAME:
Using their knowledge of electrical circuits to design and create a simple electrical product.

WAISTCOATS:
Creating templates and using simple stitches, as well as exploring fastenings.

BRIDGES:
Researching and exploring different types of bridges, looking at support and design.

ELECTRICAL SYSTEMS

TEXTILES

STRUCTURES

YEAR 5

Generating ideas through sketching and discussion.

To know that 'form over purpose' means that a product looks good but does not work very well.

Designing a waistcoat in accordance with a specification and design criteria to fit a specific theme.

To understand that it is important to design clothing with the client/target customer in mind.

Selecting appropriate tools and equipment for particular tasks.

To understand some different ways to reinforce structures.

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DT LEARNING JOURNEY – GRANGE PARK SCHOOL