St. Joseph's Catholic High School

Curriculum plan for Design and Technology	September 2020

Introduction

During the KS3 course students will use research and exploration, such as the study of different cultures, to identify and understand user need, analysing the work of past and present professionals to develop and broaden their understanding. They will identify and solve their own design problems and understand how to reformulate problems given to them. They will develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations whilst using a variety of approaches. Ideas will be developed and communicated using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools. Alongside this, students will have a practical making experience, using specialist tools, techniques, processes, equipment and machinery, including computer aided manufacture. Students will investigate new and emerging technologies, test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups. They will be taught how to understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.

Topics covered in each year group

Year 7

Introduction to D&T – Acrylic Photo Holder
Practical Unit 1 Key Board
Theory Unit 2 Designing through sketching and modelling, communication of design ideas.
Practical Unit 2 SMART Battery tester

Year 8

Practical Unit 3 USB Mood light
Theory Unit 4 3D printing and prototyping
Theory Unit 5 Forces and stresses

Year 9

Practical Unit 1 Skills sticks
Practical Unit 2 Advanced Communication Skills
Practical Unit 3 Advanced CAD skills
Theory Unit 3 Materials and Properties
Theory Unit 6 Designing Principles
Theory Unit 1 New Technologies

Year 10

Practical Unit 4 Practice Project
Theory unit 7 Making Principles
Theory unit 4 technical Principles
Theory unit 2 Energy and Systems
NEA Prep
Mock Exam

Year 11
NEA continued Specialist Theory unit 5 polymers Theory revision

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