

KS3 Curriculum 2023-2024: Design and Technology

| Year 7 – Cultural influences – wooden desk tidy | | | Year 8 Alessi chocolate box (card and plastics) | | | Year 9 Candle Holders (combining materials woods and metals) | | |
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| Knowledge and skills | Enrichment | Additional information e.g. Cross-Curricular | Knowledge and skills | Enrichment | Additional information e.g. Cross-Curricular | Knowledge and skills | Enrichment | Additional information e.g. Cross- Curricular |
| Cycle 1 Introduction to the workshop How to analyse a design brief. Research African and Aboriginal cultures. Working to a specification Design solutions generated as thumb nails Woods categories of and properties Assessments: Recall questions | Nature in Design: Competition to design a product inspired by nature | English: annotations Communication - annotations | Cycle 1 Analyse a design brief. Analysis of Alessi design company and their products. Generation of specification Introduction to 3D sketching Design solutions generated (in isometric) and annotated categories of polymers-thermo, thermosetting plastics. Assessments: Recall questions | #thinkdo tasks | Communication – writing a specification annotation of design ideas | Cycle 1 How to write a design brief. Analysis of existing products. Design movements. (Art Deco, Memphis, Art nouveau, De Stijl.) Generation of specification Design Developments ideas in 2D and 3D. Evaluation of design ideas Classification and properties of metals. Assessments: Design solutions. | Sustainability competition: design a product to address environmental issues. | Science: structure of metals and environmental considerations links to using resources and properties. English: analysis of text Communication – writing a specification annotation of design ideas |

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| <p>Cycle 2 Card modelling Evaluation of card model Manufacturing techniques – woods Realisation of final design. 3D drawing Rendering</p> <p>Practical work: Manufacture of plywood desk tidy</p> <p>Assessment Final design solution Evaluation of card model</p> | | <p>English: Evaluation writing Communication – annotations</p> <p>Collaborative working: Team work in practical lessons</p> | <p>Cycle 2 Function of packaging and legal requirements Process of Vacuum forming Templates-tessellation, wastage, accuracy.</p> <p>Practical work: Manufacture vacuum forming mould for Alessi inspired chocolate</p> <p>Assessment Final design solution Practical outcome</p> | <p>Product in Tin competition</p> <p>Collaborative working: Team work in practical lessons</p> | | <p>Cycle 2 Plasticine modelling Final design solution – isometric categories of metals - Ferrous Non- ferrous</p> <p>Practical work: Manufacture of candle holder using woods and metals</p> <p>Assessment Final design solution Practical outcome</p> | <p>Collaborative working: Team work in practical lessons</p> | <p>Maths: Look at the strength of triangles. Technical drawing aspects of mathematical constructions</p> <p>Science: energy transfers, stress, strain and structures. Links to engineering.</p> <p>Science/Geography: links to climate and sustainability.</p> |
| <p>Cycle 3 Completion of practical outcome Environmental issues: case study of FSC pine Life cycle of products/ the life cycle of wood & the 6 Rs</p> | <p>My inspiration: research an inspiring designer or maker</p> | | <p>Cycle 3 Practical work: Manufacture of cardboard packaging (CAD) Cards and boards Printing techniques Evaluation</p> | <p>Plastic fantastic: design a product made using predominantly waste plastics.</p> | <p>Science: structure of metals and environmental considerations electricity, wiring and household skills. Communication: evaluation of project</p> | <p>Cycle 3 Practical work: Manufacture of candle holder using woods and metals metal and environmental issues</p> | <p>Design a product to support independent living in later life.</p> | <p>Science: properties of materials</p> <p>Maths: Measurement</p> <p>Communication – written evaluation of outcome against specification</p> |

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| Assessment End of year test | | | Assessment End of unit test. | | | Evaluation against specification Assessment End of unit test. | | |
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