



Academic Learning Plan
Design and Technology
 Year 7

Intent: To develop pupils' technical knowledge of the three core material areas, timbers, textiles and polymers. As such, pupils will work with these materials to increase their knowledge and to ensure they can safely use appropriate tools and equipment to cut, shape, join and finish these materials.



| | Term 1 | Term 2 | Term 3 | Term 4 | Term 5 | Term 6 |
|------------------------|--|---|---|---|---|---|
| Year 7 Units | Unit 1: Materials and their properties In this module, pupils will be inspired by Tatty Divine to create a silhouette keyring out of timber, polymer and textiles. To do this they will learn how to use hand tools and the pillar drill safely. They will classify materials and understand properties of each. | | Unit 2: Bot-Blocks This unit is designed to develop the pupils' skills and knowledge from Unit 1, with a focus on quality control. Pupils will learn how to draw in isometric and will be introduced to common standard components and timber finishes. | | Unit 3: Storage Solutions Pupils will develop their knowledge of natural fibres and create a storage solution for a particular client using denim. They will learn how to apply surface design using applique, embroidery and patchwork. Pupils will also be introduced to life cycle analysis. | |
| Content | <ul style="list-style-type: none"> Learning to work safely in a workshop. Categorising materials into softwoods/hardwoods; thermoforming and thermosetting polymers and natural/synthetic fibres. Identifying the properties of materials. Measuring and marking materials out accurately Identify and use appropriate hand tools to cut, shape and finish timber, acrylic and cotton. Operating a pillar drill. | | <ul style="list-style-type: none"> Identifying and applying standard components Applying timber finishes Joining timber Planning for manufacture Identifying quality control checks Isometric drawing Identify and use appropriate hand tools to cut, shape and finish timber. Operate a pillar drill | | <ul style="list-style-type: none"> Learning to work safely in a textile studio. Operating a sewing machine Threading a sewing machine Cotton production Creating a template Inserting a fastening Applying applique and embroidery Joining materials using seams Life cycle analysis of cotton product | |
| Literacy | <ul style="list-style-type: none"> Keywords on front of booklet Reading and following instructions Writing H&S rules Silent Starters/Homework tasks/Class discussion | | <ul style="list-style-type: none"> Keywords on front of booklet Writing and sequencing instructions Writing quality control checks Silent Starters/Homework Tasks/Class discussion | | <ul style="list-style-type: none"> Keywords on front of booklet Writing and sequencing cotton production Evaluating and analysing Silent Starters/Homework Tasks/Class discussion | |
| Knowledge organiser | Specific to this unit. Available to classes on Teams. | | Specific to this unit. Available to classes on Teams. | | Specific to this unit. Available to classes on Teams. | |
| Assessment | Technical Knowledge – classifying materials; knowledge of properties and identification of tools. | Create – Accuracy/Finish of keyring, Working safely | Technical Knowledge – Production planning | Create – Final design (Isometric drawing); Quality control; Working safely. | Technical Knowledge – Fibres and Fabrics | Create – Quality control/working safely. |
| GCSE AO Link (AQA D&T) | AO1 AO2 AO3 AO4 | | AO1 AO2 AO3 AO4 | | AO1 AO2 AO3 AO4 | |
| Homework | 1. Thermosetting/forming 2. Softwoods/Hardwoods 3. Natural/Synthetic fibres | 4. Material Properties 5. Tools and Equipment 6. Evaluation | 1. Isometric drawing 2. Standard Components 3. Quality Control | 4. Timber finishes 5. Packaging 6. Vacuum Forming | 1. Cotton Production 2. 6 R's 3. Overlocker | 4. Embroidery Machines 5. Fabric finishes 6. Evaluation |
| CEIAG | Creative thinking skills; Decision making; Planning. | | Creative thinking skills; Decision making; Planning; Originating new ideas; Adaptability and imagination. | | Creative thinking skills; Decision making; Planning; Originating new ideas; Adaptability and imagination; Setting goals; Conveying feelings; Capacity for curiosity. | |