

## Design and Technology – Key Stage 3

### Intent:

Design and Technology helps to prepare young people to participate confidently and successfully in an increasingly technological world.

Students will gain awareness and learn from wider influences on D&T including historical, social, cultural, environmental, and economic factors. Our youngsters are given the fundamental skills needed to go on to work creatively when designing and making real life solutions to problems.

We intend to introduce students to materials and equipment they can then go on to study further. We do include an introduction to CAD/CAM and to Textiles Technology at KS3.

### Implementation:

In Y7 we start from scratch – we assume no prior workshop knowledge and quickly get students familiar with the workshop and its equipment and machines.

The practical environment not only allows for the growth of personal workshop skills, but also encourages self-awareness, consideration and understanding of the needs of others.

We introduce students to the process of research to explore the solutions of designers both past and present and the technologies both old and emerging.

| Term          | Year 7                                  |   |  | Year 8  |   |   |
|---------------|---|---|--|---|---|---|
|               | Topic                                   | Knowledge   | Skills/Assessment  | Topic   | Knowledge   | Skills/Assessment   |
| <b>Term 1</b> |   | <b>FOOD PREPARATION AND NUTRITION SCHEME OF LEARNING IS FOLLOWED</b>  |  |   | <b>FOOD PREPARATION AND NUTRITION SCHEME OF LEARNING IS FOLLOWED</b>  |   |
| <b>Term 2</b> | <b>Health and safety in a workshop.</b> | <p><b>Week 19 DT study commences.</b></p> <p>Introduction to personal and equipment health and safety.</p> <ul style="list-style-type: none"> <li>-How to present work in D&amp;T</li> <li>-Baseline use of pencil and rules, measuring in cm and mm.</li> </ul> <p>Introduction to tools.</p> <ul style="list-style-type: none"> <li>➤ Cutting – types of saws</li> <li>➤ Drilling</li> <li>➤ Shaping</li> </ul> | <p>Workshop behaviour and responsibility agreement signed.</p> <ul style="list-style-type: none"> <li>- Technical drawing skills</li> <li>-Design and make a series of wooden shapes</li> <li>-Tenon saw to cut out a star shape</li> <li>-Coping saw and fret saw to</li> </ul> | <p><b>Re visit work shop safety.</b></p> <p><b>Woodwork – book ends</b></p> | <p><b>Week 19 DT study commences.</b></p> <p>Focus of machines and equipment experienced in Y7.</p> <ul style="list-style-type: none"> <li>-Learn the types of wood used in the design and manufacture of products.</li> <li>- soft wood</li> <li>Hard wood</li> <li>Manufactured boards</li> <li>And their environmental impact.</li> <li>-learn some woodworking joints and practice safe use of hand tools.</li> </ul> | <p>Workshop behaviour and responsibility agreement signed.</p> <p>Make corner joints: lap and finger.</p> <p>Produce a research presentation.</p> <p>Produce a series of own designs. Skilfully make your bookends – using wood and plastics.</p> |

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|--------|--|--|---|----------------------------|---|---|
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| Term 3 |  |  | cut out free hand shapes<br><br>Finish the shapes with different grades of sandpaper  |                            | Research the designers of the Bauhaus movement – including De Stijl.<br>Use this influence to design decorations for your bookends.   |   |
|        | <b>Design and make task. Tic Tac Toe game.</b> | Reinforce the skills of:<br><br>-Measuring, cutting, equipment use, workshop safety<br><br>-Introduce how designers influence the look of products<br><br>Packaging – Nets, POS info, apply isometric knowledge by designing an isometric image of the game for the packaging. | Use the skills of measuring / cutting / accurate and safe drilling<br><br>-research product identity<br><br>-Make packaging for the wooden game.<br>-Use CAD CAM if facilities allow. | <b>Textiles Technology</b> | Learn key types of fabric.<br>-woven<br>-Knitted<br>-Bonded<br><br>Experiment with different ways of adding colour to fabrics.<br><br>Make rectangular samples of dyed fabric.<br>Introduction to using a sewing machine. | Independent research into the production of three main types of fabric.<br>Research how designers used them to good effect in the 1960's fashion industry. Eg Chanel – heavy woven fabric suits<br><br>-tie dye<br>- dip dye<br>-pastel sticks<br>-Wax transfer<br>- surface decoration – hand embroidery<br><br>Make juggling balls from your samples. |