INTENT

To prepare students to be discerning and environmentally aware consumers; they understand what good, sustainable design is and what represents good value for money. To prepare students to successfully complete the GCSE and beyond acquiring everyday practical skills which will prepare them for adulthood.

At the start of each Key Stage 3 year, students complete skills development tasks which will equip them with the skills, knowledge and understanding they need to progress and achieve success. Students will then develop an awareness of design principles and have the opportunity to develop imaginative and innovative projects in response to a brief.

Broad range of STEM related careers including engineering, all design disciplines including interior design, fashion design, architecture and graphics design, medical, veterinary and dentistry where strong hand/eye coordination skills are required.

DESIGN & TECHNOLOGY Exam Preparation Based on my mock exams, which are the key areas I need to focus on? Core technical principles Non-examined assessment Non-examined assessment **Exam Preparation** Specialist technical principles. Designing and making principles. What do I need to demonstrate in my What do I need to demonstrate in my S Based on my mock exams, which work to achieve marks in the upper Ш work to achieve marks in the upper mark EMESTE Ĭ N are the key areas I need to focus mark band for AC5 (making) and AC6 band for AC3 (generation of ideas) and **SEMESTER 4** (evaluation)? **IMPACT** AC4 (development)? **ESTER** Щ **YEAR 11** Generating original design ideas. Creating a manufacturing specification. Ш Core technical principles. Developing ideas. lanning the making process. Making high quality Specialist technical principles. ス Advantages of modelling ideas. products using a range of skills. Surface finishing ゎ Designing and making principles Testing ideas. Specififying materials. Testing and evaluating. N Composite Non-examined Modern and Systems approach Mechanical Mechanical materials and assessment smart materials Skills development - Skillsbot devices devices to designing technical textiles LIFELONG OPPORTUNITIES 2 \mathfrak{C} ER ER TER How can materials be worked with to Why is it important to consider the properties of materials when designing a product? What design opportunities does the produce high quality products? EST contextual challenge present? ES. Interpreting a working drawing. Understand the Describe developments EM SEM EM Use systems diagrams Marking out. Cutting, shaping and drilling. nctions of mechanica ade through the invention Timber metals and flowcharts to Analysing the contextual challenge Using the mortice machine. of modern and smart devices to produce of new or improved olymers, textiles and analyse and solve a S Carrying out primary research materials. Forming thermoplastics. Metal casting linear, rotary, rocesses involving smart Semester S paper and board. given proble. Analysing and interpreting research findings Using components. Designing principles. reciprocating and and modern materials. Interviewing a client. Making principles. Applying a surface finish. cillating movement Writing a specification **Energy generation and** storage New and emerging technologies **Bug Hotel Bug Hotel** Life skills E N Which practical skills will I What research will I need to П П How can modelling an idea How do new technologies affect How do new technologies affect the collect to develop a need to be an independent the design and manufacture of design and manufacture of products? help to develop an effective and capable adult? successful design? **IESTER** ES products? Ш final design? **YEAR 10** Sustainability and the environment Why are bees and insects in decline Making a high quality product. ші щ Generating quality design ideas Industry and enterprise People, culture and society. Product analysis. Applying a surface finish. Z ゎ Modelling a design. Working Production techniques and systems. Primary and secondary research Wiring a plug. Properties of ယ drawings. Cutting lists. Informina design decisions Choosing appropriate materials. materials Product analysis. Marking out, cutting and shaping Properties of materials to tolerance. Skills Development - Felt Skills Development - Skillsbox Tie-Dye T-Shirts **Tie-Dye T-Shirts** monster \mathfrak{C} Why are materials combined and what How can I join materials using What is the principle of the tie-dye \simeq How can CAD (computer aided design) α α α manufacturing techniques? technique and how can different are the advantages and disadvantages of help me produce high quality work? ш ш ш doing so? techniques be achieved? S YEAR 9 Working safely in the workshop. й ш Understanding the tie-dye technique. Properties of different materials. Using CAD (2D Design Tools) to create a logo. Understanding tolerances. SEM Testing and evaluating different techniques. SEM Product analysis. SEN Surface decoration techniques. Marking out, cutting out and shaping. Imaginative design ideas which meet the Writing a specification Ш Evaluating a prototype. Common woodwork joints, permanent and requirements of a client. non-permanent methods of joining materials S Knock down fittings and components **Skills Development** Skills Development - Storage Applying a surface finish to a Felt monster **Designing a Memphis clock** Making a Memphis clock box and bird box sharpener product. Further skills development How can I apply sewing How can I represent the style of a How can I work safely in a school D&T How can I used workshop tools Why and how do we apply surface techniques to make a high Ĭ S ĔΜ Ĭ N EM design movement in a design for and equipment to design and workshop? finishes to products? quality product? a product? make a high quality product? ES **ESTER** YEAR 8 What is D&T and where can D&T take me? Reasons for applying a surface finish Furning a 2D drawing into a 3D How to work safely in a workshop Objectively reflecting and evaluating or Marking out. Cutting and shaping form. Applique. Using a pattern Ë mi Ш Research design movements, materials a project. Seeking and considering third Seam allowance. Stitching Developing basic making skills. Assembly. Permanent methods of nd the client. Iterative design. Benefits R R Reflecting on skills developed and areas for party opinion. Developing accuracy skills techniques. Hand embroidery of modelling and idea. for Year 8 and Year 9 Incorporating components