Key Stage 4 LTP

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| **Curriculum Intent** |
| The following schemes of learning are designed to help develop and reinforce specialist practical skills simultaneously. Courses based on the AQA specification must encourage students to:• demonstrate their understanding that all design and technological activity takes place within contexts that influence the outcomes of design practice• develop realistic design proposals as a result of the exploration of design opportunities and users’ needs, wants and values• use imagination, experimentation and combine ideas when designing• develop the skills to critique and refine their own ideas whilst designing and making• communicate their design ideas and decisions using different media and techniques, as appropriate for different audiences at key points in their designing• develop decision making skills, including planning & organisation of time & resources when managing their own project work• develop a broad knowledge of materials, components and technologies and practical skills to develop high quality, imaginative and functional prototypes• be ambitious and open to explore and take design risks in order to stretch the development of design proposals, avoiding clichéd or stereotypical responses• consider the costs, commercial viability and marketing of products• demonstrate safe working practices in design and technology• use key design and technology terminology including those related to: designing, innovation and communication; materials and technologies; making, manufacture and production; critiquing, values and ethics.These objectives are made clear at the start of each project explaining what their final objective will be, this is achieved by breaking down the project to be delivered each lesson through smaller but focused objectives. Building on pupils prior knowledge and ability each project is designed based on a wide variety of design industries which will creatively help embed the exploration of design opportunities, users’ needs, wants and values and use imagination, experimentation when combining ideas when designing. Students will complete project booklets designed to encourage a method of exploration and analysis to help students with interdependence, responsibility and their learning experience towards their NEA.Spiritual development is very important in Product Design as the process of creative thinking and problem solving lies at the centre of the subject. A pupil's ability to think creatively and show innovation can be inspirational to others but also increase their own self confidence and belief in their own abilities. British values and PSHE is generally taught and explored within each designed project, as it is one of the fundamental areas within the design industry focusing taking the views and opinions of others into account but still have the right to making their own choices, to understand that many great design ideas originate from other cultures and to offer supportive comments in evaluations that will improve learning outcomes in a way that is objective but sensitive to the listener.  |

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| **Prior Learning Summary** |
| Students in KS3 will have learned Basic skills in technical drawing and design requirements alongside theory and knowledge into materials, techniques and processes across the design industry.Using these skills students will have completed a project on packaging, branding and functional jewellery. |

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| **Curriculum Structure – Year 9** |
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| **Curriculum Structure – Year 10** |
| C | C | C | C | C | C | C | C | C | C | C | C | C | C | D | D | D | D | D | D | D | D | D | D | D | D | D | E | E | E | E | E | F | F | F | F | F | F | F |

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| **Curriculum Structure – Year 11** |
| F | F | F | F | F | F | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |  |  |  |  |  |  |  |  |  |

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| **Unit A – Flat Pack Furniture**  |
| **Overview** | Students will research and develop ideas based on the Memphis group focusing on the ergonomics and anthropometrics needed to be considered In furniture.  |
| **Aims** | To understand how new and emerging technologies have changed the way we live and how computers and automations have impacted upon design and organisation of the work place. To be able to explain when different manufacturing methods are used for different [production volumes. |

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| **Unit B – Sustainable lighting** |
| **Overview** | Student will research, develop and produce lighting focusing on sustainability, recycling and the working properties of paper and boards to create cardboard lighting. |
| **Aims** | To be aware of the impact that resource consumption has on the planetUnderstand how the environment can be protected by responsible design and manufacturing To be able to recognise, characterise and know the physical and working properties of different types of paper and boards and where their primary sources are from. |

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| **Unit C – Design Ventura** |
| **Overview** | Design Ventura: A design competition where students will design and make a prototype for a product to be manufactured to be sold in a Design Museum shop. |
| **Aims** | Design Ventura challenges students in years 9, 10 and 11 to design a new product for the Design Museum shop.Design Ventura, the [Design Museum’s](http://designmuseum.org/) flagship learning project, is an opportunity for students to develop design thinking, creative and business capabilities and employability skills. Students, working in teams, are asked to consider the whole process of design, from initial ideas to manufacturing and budgets to marketing and branding.The top ten state school teams are invited to a pitching event at the Design Museum and the winning team, announced at the Celebration Event, go on to work with a professional design team to develop their idea and see it on sale the Design Museum Shop. |

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| **Unit D – NEA Mock** |
| **Overview** | NEA Mock: Project based on a previous NEA provided by the exam board |
| **Aims** | Students are given the opportunity to practice an NEA mock portfolio in preparation for the final assessment in the end of year 10. Students are walked through the process of completing the task in an environment that allows them to answer questions. (The JCQ guidelines do not allow this level of interaction form the teacher when they complete the final task do by having this practice they are able to gain understanding in advance) They are shown best practice and given a framework to follow to enable them to do this.  |

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| **Unit E – Exam Revision** |
| **Overview** | Theory Revision  |
| **Aims** | An opportunity to select areas of weakness in student knowledge prior to the exam. **Section A – Core technical principles (20 marks)**A mixture of multiple choice and short answer questions assessing a breadth of technicalknowledge and understanding.**Section B – Specialist technical principles (30 marks)**Several short answer questions (2–5 marks) and one extended response to assess a more indepth knowledge of technical principles.**Section C – Designing and making principles (50 marks)**A mixture of short answer and extended response questions. |

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| **Unit F – NEA** |
| **Overview** | Final NEA provided by the Exam board. |
| **Aims** | The NEA provides students the opportunity to demonstrate their abilities in the practical application of:• Core technical principles• Specialist technical principles• Designing and making principlesBy completing a substantial design and make task in the following areas:• Identifying and investigating design possibilities• Producing a design brief and specification• Generating design ideas• Developing design ideas• Realising design ideas• Analysing & evaluatingIn the spirit of the iterative design process, the above should be awarded holistically wherethey take place and not in a linear mannerContextual challenges to be released annually by AQA on 1 June in the year prior to thesubmission of the NEA• Students will produce a prototype and a portfolio of evidence• Work will be marked by teachers and moderated by AQA |