**Personalised Learning Checklist**

Subject: **BTEC Engineering Level 3 Extended Diploma**

Year group: 12 into 13

Dear Student,

During the academy closure you have been set a number of tasks. The list below is the learning you should have completed. Your teacher will use the list to check your progress during this time. It may be used for short quizzes, mini assessments or homework. Where there are gaps your lessons will focus on improving your knowledge and understanding.

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| **Unit 3** Objective | My personal RAG rating (Red- do not understand, Amber- some understanding, Green- I am confident | | | Teacher RAG rating |
| Know how to deconstruct a brief | RED | AMBER | GREEN |  |
| Know how to write a specification | RED | AMBER | GREEN |  |
| Be able to draw in both Isometric and orthographic projection | RED | AMBER | GREEN |  |
| Know how to effectively annotate and describe all the elements of a design | RED | AMBER | GREEN |  |
| Be able to analyse a set of signs to choose an effective design | RED | AMBER | GREEN |  |
| Know all the manufacturing technics needed to produce a range of different ideas | RED | AMBER | GREEN |  |
| Understand the different materials need to produce a range of different design ideas. | RED | AMBER | GREEN |  |
| Be able to effectively evaluate a final design against a specification. | RED | AMBER | GREEN |  |

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| **Unit 4** Objective | My personal RAG rating (Red- do not understand, Amber- some understanding, Green- I am confident | | | Teacher RAG rating |
| Know the different engineering sectors and be able to discuss what they produce | RED | AMBER | GREEN |  |
| Understand Health and safety issues from ‘The safe application of Technical Knowledge’ that would be used in industry. | RED | AMBER | GREEN |  |
| identify different types of companies Jobbing, small to medium enterprise and Large to Medium enterprise | RED | AMBER | GREEN |  |
| Understand what companies manufacture and how they fit into a market place | RED | AMBER | GREEN |  |
| Be able to discuss how a company’s overheads are affected by different manufacturing practices | RED | AMBER | GREEN |  |

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| **Unit 5** Objective | My personal RAG rating (Red- do not understand, Amber- some understanding, Green- I am confident | | | Teacher RAG rating |
| Be able to design an effective solution to a given engineering problem. | RED | AMBER | GREEN |  |
| To understand the process involved from developing a product from a given manufactured product. | RED | AMBER | GREEN |  |
| To understand how to identify and prepare for possible issues and risks in a manufacturing process | RED | AMBER | GREEN |  |
| Be able to use a range of different manufacturing process to produce a product/component part to solve an engineering problem. | RED | AMBER | GREEN |  |
| To effectively evaluate an engineered project to review its effectiveness against a given brief;. | RED | AMBER | GREEN |  |

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| **Unit 6** Objective | My personal RAG rating (Red- do not understand, Amber- some understanding, Green- I am confident | | | Teacher RAG rating |
| To be able to identify different micro rollers and select an appropriate microcontroller for a given electronic problem. | RED | AMBER | GREEN |  |
| To be able to select appropriate input and output devices to solve to engineering problem using a microcontroller. | RED | AMBER | GREEN |  |
| Use a range of different logic techniques to create an effective solution to an engineering problem that can be converted into program. | RED | AMBER | GREEN |  |
| To be able to programme effectively enough to convert any solution into a workable program. | RED | AMBER | GREEN |  |
| To be able to evaluate any solution to understand is limitations and its strengths. | RED | AMBER | GREEN |  |

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| **Unit 25** Objective | My personal RAG rating (Red- do not understand, Amber- some understanding, Green- I am confident | | | Teacher RAG rating |
| To understand the microscopic makeup of a range of metals including grain boundaries, crystalline structures and different elements of the metal. | RED | AMBER | GREEN |  |
| An understanding of how different hot and cold process affect the microstructes of metals. | RED | AMBER | GREEN |  |
| To identify how the processed changes in the microstructure of metals changes the properties of a metal. | RED | AMBER | GREEN |  |
| To identify the different applications of different metals based on their properties and how they have been processed. | RED | AMBER | GREEN |  |