**BTEC Assignment Brief**

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| **Qualification** | Pearson BTEC Level 3 National Extended Diploma in Engineering  |
| **Unit number and title** | **Unit 44: Fabrication Manufacturing Processes** |
| **Learning aim(s)**  | **B: Carry out the preparation necessary to manufacture a fabricated product safely****C: Carry out fabrication processes to manufacture a fabricated product safely** |
| **Assignment title** | 2. Wood burning stove |
| **Assessor** |  |
| **Issue date** |  |
| **Hand in deadline**  |  |
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| **Vocational Scenario or Context** | You are working as a final year apprentice in a sheet metal fabrication engineering company. Your supervisor would like you to produce a prototype wood burning stove utilising the technology of sheet metal fabrication processes, as she needs to test out a new product range that the company wishes to launch in the autumn. Your supervisor wants you to explore a range of processes to manufacture the stove  |
| **Task 1** | You should plan your manufacture of the stove using the preliminary plans provided by your supervisor. She has left some engineering design decisions for you to make in order to produce a product that is fit for purpose. Your planning report will need to cover the following areas * Health and safety requirements to produce a stove from sheet metal
* Risk assessment of the workshop where the stove will be manufactured
* Interpreting the orthographic drawing showing your understanding BS8888 drawing conventions
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| **Checklist of evidence required**  | A report which will include annotated drawings, inspection records and notes explaining, health and safety, risk assessment. |
| **Criteria covered by this task:** |
| Unit/Criteria reference | To achieve the criteria you must show that you are able to: |
| 44/BC.D2 | Refine, during the process, the blank design, set-up and parameters of the fabrication equipment to safely, effectively and efficiently manufacture a fabricated product. |
| 44/B.M2 | Analyse component blanks through modelling and safely and accurately mark components out. |
| 44/B.P2 | Explain which health and safety requirements apply when using fabrication processes and conduct a risk assessment of the work environment. |
| 44/B.P3 | Set up safely at least two cutting, two forming and two joining processes |
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| **Task 2** | Manufacture from the provided working drawings a wood burning stove using the following features:-* At least 4 components
* At least 2 joining techniques

Additionally the four components should be made safely using at least two cutting processes and one forming process. Your development logbook will show how you have worked to a given tolerance and accuracy. |
| **Checklist of evidence required** | Developmental logbook, the physical fabricated product (wood burning stove), photos of the product, observation records/witness statements, |
| **Criteria covered by this task:** |
| Unit/Criteria reference | To achieve the criteria you must show that you are able to: |
| 44/BC.D2 | Refine, during the process, the blank design, set-up and parameters of the fabrication equipment to safely, effectively and efficiently manufacture a fabricated product. |
| 44/C.M3 | Manufacture a fabricated product accurately containing at least four formed components joined using at least two processes. |
| 44/C.P4 | Manufacture at least four fabricated formed components safely using at least two cutting processes and at least one forming process. |
| 44/B.P5 | Manufacture a fabricated product safely containing at least four formedcomponents joined using at least two processes. |
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| **Sources of information to support you with this Assignment** | Shared drive – Unit 44 Fabrication |
| **Other assessment materials attached to this Assignment Brief** |  |