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| **DESIGN AND MANUFACTURE              Higher**  **Design, Engineering & Technology** |
| **What are the aims of this course?**  The aims of this course are to enable learners to develop:   * research skills * idea generation techniques * the ability to read drawings and diagrams * the ability to communicate design ideas and practical details * the ability to evaluate and apply both tangible and subjective feedback * the ability to devise, plan and develop practical solutions to design opportunities |
| **What are the recommended levels of entry for this course?**  Pupils who have a pass at National 5 level in Design & Manufacture or Higher Grade Art along with National 5 English would normally be accepted into this course.  Pupils who have a pass at National 5 in Graphic Communication and/or Art and Design will be considered, but this will be at the discretion of the Principal Teacher. |
| **What is included in this course?**  There are two distinct units within this course. They are:  **Design** – This unit covers the product design process form brief to resolved design proposals.  It helps learners develop skills in initiating, developing and communicating design proposals.  It allows them to develop an appreciation of the design/make/test process and the importance of evaluating.  **Materials and Manufacture –**This unit covers the product design process from design proposals to prototyping and final production.  It helps learners to ‘close the design loop’ by manufacturing their design ideas.  It allows learners to develop practical skills and gain an appreciation of the properties and uses of materials. |
| **What skills will I develop?**  Pupils will be able to enhance their design skills, creativity, iterative thinking, problem solving, understanding the relationship between cause and effect of decisions taken, an engagement with a variety of technologies in both design and manufacture, dialogue and discussion, and the articulation, communication and realisation of ideas. |
| **What learning and teaching approaches will I experience?**  This course uses a wide range of teaching and learning approaches. Candidates are encouraged to adopt a broad view of the process of design and manufacture, take responsibility for their own actions and decisions, devise plans and procedures, develop and organise ideas and solve problems, make effective use of new and existing knowledge and justify their decisions.  The course will also provide candidates with the opportunity to solve practical problems in applied contexts. |
| **How will I be assessed?**  Pupils will be required to pass both units listed above.  In addition they will complete a Design Assignment which will be internally assessed. They shall also have an external examination which will be externally assessed.  To gain the award of the Course, the learner must pass all of the Units as well as the Course assessment. Course assessment will provide the basis for grading attainment in the Course award. |
| **What are the homework requirements?**  Homework will take the form of either sketching practice, design problems or written questions. |
| **What are the possible progression routes?**  This Course or its components may provide progression to: -  Advanced Higher Design and Manufacture Course  other technological Courses at Higher  Skills for Work Courses in manufacturing or design  employment, apprenticeships and/or training in manufacturing or design related fields  and ultimately, for some, to:-  A range of Product Design or Product Design Engineering-related Higher National Certificates (HNCs) and Higher National Diplomas (HNDs)  Degrees in Product Design or Product Design Engineering and related disciplines  Success in the Course may support entry to similar areas of study in further education or in employment. |

***DESIGN AND MANUFACTURE (ADVANCED HIGHER )– This will be taught as a Campus Course at Perth Grammar School in column E***