

Design Technology – Practice NEA

Year 10 – Unit 1 – Autumn Term 1



Keywords	
Keyword	Definition
Aesthetics	The way something looks
Annotating	Labelling your sketch with relevant information
Brief	A statement about what you plan to achieve in your project
Client	The person/company who have asked you to design their product
Ergonomics	How a person uses a product
Function	How a product works
Isometric	A sketching technique to make images look 3D
Initial ideas	The first solutions to your design problem.
Manufacture	Making your product
Materials	What your product will be made from
Modelling	Using readily-available materials to create a working 3D version of your idea
Product analysis	Critically evaluating an existing products ability to solve the problem
Specification	A document to say exactly what the product should do.

Design Process
<p><u>Context Analysis</u> Looking closely at the given themes or questions and coming up with different problems.</p> <p><u>Proving a problem exists</u> Using facts and figures to show that the problem you identified is realistic.</p> <p><u>Identifying stakeholders</u> Looking at the people who would be invested in the success of your design and finding out what their needs and wants are.</p> <p><u>Design brief</u> Using the information from research, write a statement about what the project will include</p> <p><u>Analysing Existing Products</u> With the design brief in mind, critically evaluate products currently on the market that already provide a solution to the problem.</p> <p><u>Specification</u> A document with specific details about what the product must, should and could do.</p> <p><u>Design Ideas</u> Sketches that show how you plan to solve the problem</p> <p><u>Development</u> Ideas are improved by using feedback from stakeholders</p> <p><u>Modelling</u> Using paper, card or ICT software make part or all of your idea in 3D to test with the stakeholders</p>

Properties of materials	
Keyword	Description
Strength	The ability to withstand a force without breaking or bending
Hardness	The ability to resist wear, scratching and indentation
Durability	The ability to resist wear, especially as a result of weathering
Elasticity	The ability to bend and then to return to its original shape and size
Toughness	The ability to withstand blows or sudden shocks without breaking
Conductivity	The ability to conduct heat or electricity
Plasticity	The ability to permanently change shape
Malleability	The ability to permanently deform in all directions without breaking
Ductility	The ability to deform usually by stretching along its length
Material Categories	
Category	Definition
Hardwood	From deciduous trees. Usually slow growing.
Softwood	From coniferous trees. Usually fast growing
Manufactures board	From fibres or offcuts of wood, developed for a certain purpose.
Ferrous metal	Contains iron
Non-ferrous metal	Does not contain iron
Alloy	A mix of at least two different metals