

Meden School Curriculum Planning

Subject	GCSE D&T	Year Group	11	Sequence No.	NEA 4	Topic	Developing Design Ideas
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Retrieval	Core Knowledge	Student Thinking
What do teachers need retrieve from students before they start teaching new content ?	What specific ambitious knowledge do teachers need teach students in this sequence of learning?	What real life examples can be applied to this sequence of learning to development of our students thinking, encouraging them to see the inequalities around them and 'do something about them!'
<input type="checkbox"/> Students have experience of modelling on both 2D Design and CAD from their KS3, and earlier KS4 D&T studies. This knowledge needs to be retrieved in order to support this activity. <input type="checkbox"/> Students have knowledge of both materials and processes from their KS3, and earlier KS4 D&T studies. This knowledge needs to be retrieved in order to support this activity. <input type="checkbox"/> Students have knowledge of 3 rd Angle orthographic drawing both from their earlier KS3 D&T studies, (and from KS4 Engineering if they are following that course). This knowledge needs to be retrieved in order to support this activity.	<input type="checkbox"/> Know how to develop the chosen design idea in order to be able to bring it to the point of production. <input type="checkbox"/> Know how to model the design both physically and on screen in order to be able to gather knowledge and feedback from the client on the design. <input type="checkbox"/> Know how to use the relevant CAD software to be able to produce the necessary files to use the laser/3D printer to produce the required parts. <input type="checkbox"/> Know which materials to use and why each is an appropriate material selection. <input type="checkbox"/> Know which processes to use and why that is an appropriate process to have selected. <input type="checkbox"/> Know which components to use and why each is an appropriate component selection. <input type="checkbox"/> Know that a cutting list will contain details of the overall dimensions (height, width, thickness) and material type for each part of the product. <input type="checkbox"/> Know the material/component requirements in sufficient detail to enable the production of an accurate cutting list and component list. <input type="checkbox"/> Know the correct format/layout for a 3 rd angle orthographic drawing and be able to draw the design using these conventions. <input type="checkbox"/> Know that a production plan contains details for each stage of production, in the correct order alongside details of time, health & safety precautions and quality control steps for each stage. <input type="checkbox"/> Be able to produce a production plan containing the above information.	<input type="checkbox"/> We will have a wide range of materials and processes available for the making of our final prototype products however there may be some compromises that have to be made due to availability or cost. Consider the ingenuity seen in examples of where those in third world situations have had to repurpose/ improvise products/materials/parts in order to provide for their daily lives.