

Meden School Curriculum Planning							
Subject	D&T	Year Group	7	Sequence No.	Module 1	Topic	Passive Amp

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!'
<p>The following knowledge and understanding should be retrieved:</p> <ul style="list-style-type: none"> <input type="checkbox"/> From KS2 students should have encountered 'designing purposeful, functional, appealing products for themselves and other users based on design criteria' and this past experience should be retrieved at the point when the coloured design is developed and applied to the amp. <input type="checkbox"/> From KS2 students should have experience of 'using a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) – and 'using a wide range of materials' and this past experience should be retrieved during the making process. <input type="checkbox"/> Once delivery of the module is underway there are a number of retrieval opportunities within the module referring back to learning from 	<p>The following ambitious knowledge needs to be taught:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The different applications for the Tenon saw (used only for cutting straight lines) and the Coping saw (can cut curves/corners). <input type="checkbox"/> The correct and skilful use of the coping saw to cut accurate straight line and curved line shapes, specifically teaching: <ul style="list-style-type: none"> - Correct hold – ONLY holding the handle, not the frame. - Keeping the blade horizontal as you cut. - Rotating the blade to follow curves. - The saw MUST be always positioned and pointing at 90 degrees to the piece of work as cutting. <input type="checkbox"/> The key content required within an effective production plan, specifically: <ul style="list-style-type: none"> - A description of reach stage incorporating the proper names for tools, processes and materials. - A diagram illustrating the stage, (not a 'sketch' as this implies less tidy or factual/informative). - An explanation of the health and safety precautions to be taken at each stage. - A note of the quality control steps (the things done to make it good/accurate/high quality) taken at each stage. <input type="checkbox"/> The correct, skilful and safe use of the vertical sander to make edges smooth and product pieces accurate, specifically including: <ul style="list-style-type: none"> - Wearing an apron and visor/goggles. - The location of start/stop buttons and emergency stops. - The need to tie back long hair, ensure ties/lanyards are tucked away. 	<ul style="list-style-type: none"> <input type="checkbox"/> Consider the merits of using timbers and manufactured boards in relation to their environmental impact/credentials – supporting the students in being able to make decisions as consumers which will enable them to consume and live more sustainably. <input type="checkbox"/> A knowledge of what the Forest Stewardship Council is and what it does in relation to sustainable timber production. <input type="checkbox"/> An understanding of how/why timber can be considered to be much closer to carbon neutral (than plastics) because the carbon released due to its use/disposal was taken out of the atmosphere as it grew. <input type="checkbox"/> An understanding of why 'handmade' is so much more expensive than mass produced. A consideration of how imported mass-produced products can impact locally produced and craftsperson made products. Consider:

<p>previous weeks. These are particularly seen in the correct methods for using the coping saw (slide 9 etc), the correct method for using the vertical sander (slide 11 etc), and the correct method for using the pillar drill (slide 18 etc).</p>	<ul style="list-style-type: none"> - The fact that it is a one person machine and only one person is allowed in/over the box area marked on the floor. - The fact that the machine is only used to remove SMALL amounts of material and that if there are larger areas of waste these should be cut off before the last one or two mm are sanded away. - That the workpiece MUST ALWAYS be sat, flat on the table and that holding pieces up against the belt is never done. <p><input type="checkbox"/> The concept and practice of cutting to the waste side of the line in order to achieve improved accuracy and quality.</p> <p><input type="checkbox"/> The correct, skilful and safe use of the pillar drill with both a conventional twist drill and a larger forstner bit to achieve accurate openings, specifically including:</p> <ul style="list-style-type: none"> - Wearing an apron and visor/goggles. - The location of start/stop buttons and emergency stops. - The need to tie back long hair, ensure ties/lanyards are tucked away. - The fact that it is a one person machine and only one person is allowed in/over the box area marked on the floor. - The method for fitting or removing a drill bit into/out of the chuck using the chuck key. - The need to position the chuck guard before drilling. - The need to use a piece of sacrificial material underneath the workpiece before drilling and the benefit of ensuring the drilling is done over an area of the sacrificial board that is not heavily drilled or damaged, (ie reduces splintering on the underside). - Holding the workpiece either in a machine vice, with a toggle clamp, or by hand. - Students understand that the workpiece is more likely to try and lift up than spin if not held securely and to both expect and protect against this. <p><input type="checkbox"/> The correct/best use of PVA and clamping in order to achieve a strong and accurate join. Specifically:</p> <ul style="list-style-type: none"> - Guidance/demonstration regarding suitable quantity. - Ensuring glue is on all contacting faces, not just the largest one. - 'Rubbing' adjacent pieces as they are connected to expel air pockets. - Clamping pieces to drive the glue into the surface and create a stronger bond. 	<ul style="list-style-type: none"> - Off-shore manufacturing, (its meaning, benefits and wider impact). - Our responsibilities and actions in light of the potential wages/working conditions of workers in the overseas supply chains. - Apply the above to scenarios the students will be familiar with, (e.g. very low cost and/or 'fast' fashion).
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