

Year 9 Workshop Skills 2022-23

During the rotation, students will cover a mix of theory and complete practical projects. Lessons are organised in topics but sometimes covered in different order due to bank holidays or other lesson interruptions.

Topics	Curriculum Overview
WORKSHOP	
1	<p>Health and Safety - Securing</p> <ul style="list-style-type: none"> ● Students complete a summary of health and safety expectations in the workshop, reflecting on what they remember from Year 8. ● Students consider the equipment in the workshop and see why being safe is so important. ● Students secure their knowledge basic rules of the workshop when completing practical work. ● Students complete a 'spot the problem page' where they apply what they have learnt. <ul style="list-style-type: none"> ○ <i>What is a hazard?</i> ○ <i>Why do we need to be safe in a workshop?</i> ○ <i>Do we need to be safe in order to be successful practically?</i> ○ <i>Why do we need to prepare for practical lessons?</i> ○ <i>What is dangerous in the workshop?</i> ○ <i>What are the expectations?</i>
2	<p>Initial Design Work</p> <ul style="list-style-type: none"> ● Students will be introduced to the project and begin to outline the designs for the Security Box. ● Students apply their design skills to plan out their ideas. ● Students apply their design skills to annotate their design work. ● Students will present their work like a designer. <ul style="list-style-type: none"> ○ <i>Why do we need to design things before deciding on our final design?</i> ○ <i>Why should we design before making?</i> ○ <i>What are the ways we need to annotate our work?</i>
3	<p>Final Design Work</p> <ul style="list-style-type: none"> ● Students refer to feedback and complete final design work for their chosen idea. ● Students will use their annotation skills to describe their idea in detail. <ul style="list-style-type: none"> ○ <i>What is a working drawing?</i> ○ <i>Do plans need to be detailed or concise?</i> ○ <i>What details should we include?</i> ○ <i>Who is your design for?</i>
4	<p>Practical Part 1</p> <ul style="list-style-type: none"> ● Students will measure the Timber for the Security Box using steel rules and try squares. ● Students will take it in turns to sand the parts for the Security Box sides. ● Students will cut the joints for their Security Box using a Tenon Saw <ul style="list-style-type: none"> ○ <i>How do we get ready for practicals?</i> ○ <i>What tools are we using for each process?</i> ○ <i>Why can practical work take time to get a high-quality finish?</i> ○ <i>Why do we need to quality assure our work?</i>
5	<p>Practical Part 2</p> <ul style="list-style-type: none"> ● Students will continue to work on their joints for the Security Box. ● Some students will move on to gluing the sides, lid and base of their Security Box. <ul style="list-style-type: none"> ○ <i>Why do we need to glue with precision?</i> ○ <i>How do we check that our box is correctly square?</i>
5	<p>Practical Part 2</p> <ul style="list-style-type: none"> ● Students will use files/sandpaper to begin the shaping process. <ul style="list-style-type: none"> ○ <i>Why do we need to use templates?</i> ○ <i>What techniques do you use when working with tools?</i> ○ <i>Why do we need to be resilient when making?</i> ○ <i>Why do we need to use different techniques when working with Timber?</i> ○ <i>Why do we start with the lowest grade of sandpaper?</i> ○ <i>What standard of finish is the best type of finish?</i>
6	<p>Practical Part 3</p> <ul style="list-style-type: none"> ● Students will cut their boxes in half to create the lid and base. ● Students can then begin the decoration process. ● Students will complete the personalisation of their Security Box using a mixture of media, including painting, paint pens or the laser cutter for more detailed design work. ● Students will learn about the finishes we can apply to timber to make them more aesthetically pleasing. ● Students will evaluate their work and compare it to the working drawings given to them in their exercise books.

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	<ul style="list-style-type: none"> ○ <i>Why are finishes important on materials?</i> ○ <i>Why do we need a finish on our Security Boxes?</i> ○ <i>What is the best type of finish for Timber?</i>
7	<p><u>Timbers Theory Knowledge – covering in Y9 due to COVID Knowledge gap, for potential GCSE choices</u></p> <ul style="list-style-type: none"> ● Students will complete a Timbers Knowledge organiser with guidance from a teacher. ● Students will learn about the three key areas of Timbers – hardwood, softwood and manufactured boards. ● Students will also learn about examples of each of the three key areas. ● Students will also learn about the different surface finishes. <ul style="list-style-type: none"> ○ <i>What types of Timbers are there?</i> ○ <i>What tools can we use when we use Timber materials?</i> ○ <i>Why do we need to know the difference between all three types?</i>
8	<p><u>Evaluation</u></p> <ul style="list-style-type: none"> ● Students that complete their work will evaluate their practical work in their booklets. ● Students will complete some self-evaluation against the marking criteria to see where they think they are. <ul style="list-style-type: none"> ○ <i>What were the stages of manufacture?</i> ○ <i>Why is it important to reflect on the skills we have learnt?</i> ○ <i>Do we need to be resilient if things go wrong?</i>
PICTURE FRAME	
10	<p><u>RE-CAP Health and Safety</u></p> <ul style="list-style-type: none"> ● Students summarise health and safety expectations. ● Students look at the equipment we use and see why being safe is so important. <ul style="list-style-type: none"> ○ <i>Why do we need to be safe with equipment despite having prior knowledge?</i> ○ <i>Do we need to be safe in order to be successful practically?</i> ○ <i>Why do we need to prepare for practical lessons?</i> ○ <i>What are the expectations?</i>
11	<p><u>Initial Design Work</u></p> <ul style="list-style-type: none"> ● Students will be introduced to the project and begin to outline the designs for the Picture Frame shape and decorations. ● Students will apply their prior knowledge on to plan out their ideas. ● Students will apply their prior knowledge to annotate their design work. ● Students will present their work like a designer. <ul style="list-style-type: none"> ○ <i>Why do we need to design things before deciding on our final design?</i> ○ <i>Why should we design before making?</i> ○ <i>What are the ways we need to annotate our work?</i>
12	<p><u>Theory Knowledge</u></p> <ul style="list-style-type: none"> ● Students will complete a summary knowledge organiser with guidance from a teacher, for materials they have used throughout KS3 at Armfield. ● Students will recap the main key areas of materials knowledge. ● Students will begin to consider key concerns for designing at KS4. <ul style="list-style-type: none"> ○ <i>Which materials are sustainable?</i> ○ <i>Are there any that may have a negative environmental impact?</i> ○ <i>Has technology changed the way we use materials?</i>
13	<p><u>Final Design Work and Template making</u></p> <ul style="list-style-type: none"> ● Students refer to feedback and complete final design work for their chosen idea. ● Students will apply their annotation skills to describe their idea in detail. <ul style="list-style-type: none"> ○ <i>Why do we need to have a template?</i> ○ <i>What details should we include?</i> ○ <i>Who is your design for?</i>
14	<p><u>Practical 1</u></p> <ul style="list-style-type: none"> ● Students cut out their templates and begin the making process. ● Students will learn about the types of settings used on the laser cutter. ● Students trace their templates and begin to cut their shape using a coping saw. ● Students glue the frame holder to the back of the frame. <ul style="list-style-type: none"> ○ <i>Why do we need to have a template?</i> ○ <i>Why should we work methodically when making a practical?</i>
15	<p><u>Practical 2</u></p> <ul style="list-style-type: none"> ● Students continue to work on putting the parts needed for their Picture Frame together. ● Students will complete their practical work.

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	<ul style="list-style-type: none"> ● Students will work independently to sand to a high finish, add the decoration as well as the final backing parts. <ul style="list-style-type: none"> ○ <i>Why do we need to work methodically?</i> ○ <i>Why should our frames be well presented?</i>
16	<p>Evaluation</p> <ul style="list-style-type: none"> ● Students that complete their work will evaluate their practical work in their booklets. ● Students will complete some self-evaluation against the marking criteria to see where they think they are. <ul style="list-style-type: none"> ○ <i>What were the stages of manufacture?</i> ○ <i>Why is it important to reflect on the skills we have learnt?</i> ○ <i>Do we need to be resilient if things go wrong?</i>
ADDITIONAL TIME MINI PROJECT	
EXTRA	<p>Drawing Skills – Engineering Drawing</p> <ul style="list-style-type: none"> ● Students will practice their sketching skills by performing tasks under time challenges. ● Students will also look at how work is presented in Engineering Drawings. ● Students will learn how to draw quickly in timed challenges. <ul style="list-style-type: none"> ○ <i>Why is sketching an important part of design?</i> ○ <i>Why is precision important in Engineering?</i>