Topic: KS3 Ferrous and Non-ferrous metals		**Duration: 6 lessons**	**Composite: Topic & Test**
Key vocabulary:	**Core knowledge Components**	**Powerful knowledge components crucial to commit to long term memory**	**Links to previous and future topics**
Health, Safety, Conduct, Practical, Classification, Alloy, Molten, Enamelling Template Mould, Casting, Process, Product, Finish, Quality Ferrous Non-ferrous	1. How do you write a Risk Assessment? 2. What is the correct type of PPE you should wear when working with hot metals? 3. What are the Health and safety rules to follow in a practical environment? 4. Metals theory and their classification – What is the difference between Ferrous and Non-ferrous metals? 5. What is an Alloy? Why do Alloys exist? 6. All about 'Steel'- How is Steel made? 7. Introduction to the brazing hearth – How does it work? What are the specific things that need to be done to the surface of the metal before trying to braze them together? 8. What is the Enamelling process and how do you do it? Leading into a practical experience. 9. What is Pewter casting process and how do you do it? Leading into a practical experience - making a template, pouring mould and 'rustic' product. (requires only the edges to be finished). 10. What is cross filing and draw filing? What other methods can be carried out to get a good finish on a Pewter product? QA/QC	• The purpose of a Risk Assessment • Health and safety in a practical environment • Why different alloys are made to assist our everyday life. • Metal casting process • Enamelling process • Working to achieve high quality standards. • The difference between Quality Assurance and Quality control.	• This topic supports the learning of correct health and safety procedures when completing any practical work or working in any practical environment. • It prepares students for their next practical project when using different equipment but following the same risk assessment criteria. Links to 'Structural elements' in year 8. Test - Classification of materials.

Topic: KS3 Woods & Manufactured boards		**Duration: 6 lessons**	**Composite: Topic & Test**
Key vocabulary:	**Core knowledge Components**	**Powerful knowledge components crucial to commit to long term memory**	**Links to previous and future topics**
Design Manufacture Iterative Health Safety Risk assessment I.D.E.R.R Biodiversity Variety Ecosystem Manufactured board Softwood Hardwood Timber Materials Glass paper PVA glue Adhesive Wood joints Machinery Hand tools Carbon footprint Upcycling Downcycling Evaluate Assessment Systematically	1. What are the correct Health and safety procedures to follow whilst working in a workshop– including PPE (Links to employability) 2. How do I understand how to read a 5 Step risk assessment? – What they are? How do I write one? 3. What is Biodiversity? 4. What are the Woods and Manufactured board categories? 5. Wood joints and their uses and strengths. 6. Use of appropriate hand tools and equipment in the workshop. 7. How do I re-think, repair and modify practical outcomes when I make mistakes? 8. What is the purpose and function of specific adhesives? 9. Measuring, marking and cutting out leading to completed practical outcome – Soma cube 10. Evaluations demonstrating reflection of successes and areas for improvement. What are they? What do other people think about my work?	• Safe use of tools and equipment to protect the individual and others from harm. (COSHH) • Specific Protective Personal Equipment is worn for specific purposes. • How to read, understand and write a clear and concise risk assessment (using IDERR) as they are used in business and students will come across them in the world of work. • Biodiversity definition. • Natural timbers grow. Manufactured boards are made by man. Butt joint – Weak & relies on PVA. Dovetail – Mechanically strong doesn't rely on PVA. • How to modify / repair products to encourage a longer product lifespan and to discourage the 'throwaway' society. Link to reducing our carbon footprint. • PVA & QA - Measure twice, Cut once. • To evaluate you must use an initial specification to guide your writing. & peer assessments.	• This topic supports the learning of correct health and safety procedures when completing any practical work or working in any practical environment. • It prepares students for their next practical project when using different equipment but following the same risk assessment criteria. Links to CAD/CAM module in year 8. Test – Classification of materials