



Autumn/Spring or Spring/Summer (due to Yr7 rotation)			
Year 7	Topic Big question / Overview	Mobile Phone Stand Project Big question: How can students design and safely manufacture a high-quality mobile phone stand that is fit for purpose and meets a design brief? Phase one: Analyse and understand - Analyse existing mobile phone stands using ACCESS FM. - Interpret a design brief and identify the needs of the user and the requirements a successful product must meet. - Learn about the properties and appropriate uses of wood and plastics, with a focus on pine and acrylic. Phase two: Design and manufacture - Develop design ideas for a mobile phone stand that are fit for purpose and respond to the design brief. - Measure and mark out wood and acrylic accurately. - Use appropriate hand tools and workshop equipment safely to cut, shape and form the materials. - Apply suitable finishing techniques to improve the quality, appearance and function of the product. Phase three: Quality and evaluation - Manufacture and assemble a high-quality, functional phone stand. - Check accuracy and quality throughout manufacture and make adjustments where necessary. - Evaluate the finished product against the design brief and identify strengths and possible improvements.	
	Disciplinary knowledge/skills	- Product analysis: investigating existing products to inform design decisions. - Designing for purpose: understanding how function, user needs and a design brief influence design choices. - Materials knowledge: recognising relevant properties of woods and plastics and selecting materials for an intended use. - Accuracy: measuring and marking out components carefully before manufacturing. - Practical skills: cutting, shaping, forming and finishing wood and acrylic safely and accurately. - Quality control: checking dimensions, fit, finish and function during manufacture. - Evaluation: testing the completed product against the design brief and suggesting improvements. - Workshop practice: developing safe, responsible use of tools, equipment and materials.	
	New vocabulary	- Design brief - Product analysis - Fit for purpose - Function - User needs - Material properties - Timber / wood	- Acrylic - Thermoplastic - Marking out - Shaping - Finishing - Quality control - Evaluation
	Links to ...	- Mathematics: accurate measurement, dimensions and checking tolerances. - Science: properties and behaviour of woods and plastics. - Art & Design: form, proportion, aesthetics and surface finish. - PSHE / wider curriculum: safe working, independence, responsibility and resilience. - Geography: considering the environmental impacts of materials, waste and the life cycle of products.	

