KS3 ASSESSMENT

Design & Technology Resistant Materials Wood

	Acquiring	Developing	Secure	Mastered
	Is beginning to acquire the necessary knowledge for the topic(s)	Is developing the knowledge necessary to understand the topic	Understands the topic and is able to make links using the knowledge	Fully understands the topic and is able to confidently link knowledge.
Tier 1 Textiles mobile phone holder project. This project rotates on a 10 week carousel throughout year 7 & 8.	**DESIGN:** -**Basic** research and exploration of woods and manufactured boards. - **An attempt** to identify the needs of user. - **Limited** specification to inform the design of functional and appealing products. - **Basic** approaches to generate ideas. - **Limited** developed ideas lacking in annotation, sketches and **basic** plans. **MAKE:** - **Basic** use of specialist wood and plastic forming tools, techniques, processes, equipment and machinery.	**DESIGN:** -**Adequate** research and exploration of woods and manufactured boards. - **Adequate** identification of the needs and wants of user. - **Sufficient** specification to inform the design of functional and appealing products. - **Adequate** approaches to generate ideas and avoid stereotypical responses. - **Adequate** developed ideas using annotated sketches and plans. **MAKE:** - **Adequate** use of specialist wood and plastic forming tools, techniques, processes, equipment and machinery.	**DESIGN:** -**Good** research and exploration of woods and manufactured boards. - **Good** identification of the needs and wants of user. - **Detailed** specification to inform the design of functional and appealing products. - A variety of approaches to generate **good** ideas and avoid stereotypical responses. - **Effective** developed ideas using annotated sketches and plans. **MAKE:** - **Good** use of specialist wood and plastic forming tools, techniques, processes, equipment and machinery.	**DESIGN:** -**Exceptional** research and exploration of woods and manufactured boards. - **Thoroughly** identified the needs and wants of user. - **Detailed** & **justified** specification to inform the design of **innovative,** functional and appealing products. - A variety of approaches to generate **innovative** ideas and avoid stereotypical responses. - **Imaginative** developed ideas using annotated sketches and **detailed** plans.

	- **Limited** use of a range of wood and plastic materials and components, not considering their working properties. **EVALUATE:** - **Basic** evaluation of the production of their wood and plastic outcome. - **Adequate** evaluation of their design. - **Adequate** evaluation against Target Market criteria. **TECHNICAL KNOWLEDGE:** - A **basic** understanding of the types and properties of hard and softwoods and manufactured boards. Thermoplastic types and properties and fixing components for all. - **Little** consideration for the impact designers, manufacturers and consumers have on the environment.	- **Adequate** use of a range of wood and plastic materials and components, considering their working properties. **EVALUATE:** - **Adequate** evaluation of the production of their wood and plastic outcome. - **Adequate** evaluation of their design. - **Adequate** evaluation against Target Market criteria. **TECHNICAL KNOWLEDGE:** - An **adequate** understanding of the types and properties of hard and softwoods and manufactured boards. Thermoplastic types and properties and fixing components for all. - An **adequate** consideration for the impact designers, manufacturers and consumers have on the environment.	- **Good** use of a wide range of wood and plastic materials and components, considering their working properties. **EVALUATE:** - **Good** evaluation of the production of their wood and plastic outcome. - **Good** evaluation of their design. - **Good** evaluation against Target Market criteria. **TECHNICAL KNOWLEDGE:** - A **good** understanding of the types and properties of hard and softwoods and manufactured boards. Thermoplastic types and properties and fixing components for all. - An **exceptional** consideration for the impact designers, manufacturers and consumers have on the environment.	**MAKE:** - **Exceptional** use of specialist wood and plastic forming tools, techniques, processes, equipment and machinery. - Used a wide range of **complex** wood and plastic materials and components, considering their working properties. **EVALUATE:** - **Extensive** evaluation of the production of their wood and plastic outcome. - **Excellent** evaluation of their design. - **Comprehensive** evaluation against Target Market criteria. **TECHNICAL KNOWLEDGE:** - A **comprehensive** understanding of the types and properties of hard and softwoods and manufactured boards. Thermoplastic types and properties and fixing components for all.

				- An **exceptional** consideration for the impact designers, manufacturers and consumers have on the environment.

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	Is beginning to acquire the necessary knowledge for the topic(s)	Is developing the knowledge necessary to understand the topic	Understands the topic and is able to make links using the knowledge	Fully understands the topic and is able to confidently link knowledge.
Term 1a Contextual Challenge Cam and gears project design and make **Cam** and **Gear** toy This project covers 3 half terms.	**DESIGN:** -**Some** research and investigation of existing textiles products suitable for teenagers. -**Basically** explored the application of gears, cams and linkages in relation to toy design and movement required. - **Basic** dentification of the needs and wants of user. - A **brief** specification to inform the design. - **Limited** design approaches to generate ideas. - **Little or no** developed ideas using annotated sketches and plans.	**DESIGN:** -**Adequate** research and investigation of Cams, gears and linkages. - **Adequately** explored the application of gears, cams and linkages in relation to toy design and movement required. - **Adequate** identification of the needs and wants of user. - **Adequate** specification to inform the design of **innovative**, functional and appealing products. - A variety of design approaches to generate **innovative** ideas. - **Good** developed ideas using annotated sketches and plans	**DESIGN:** -**Good** research and investigation of Cams, gears and linkages. - **Fully** explored the application of gears, cams and linkages in relation to toy design and movement required. - **Good** identification of the needs and wants of user. - **Detailed** specification to inform the design of **innovative**, functional and appealing products. - A variety of design approaches to generate **innovative** ideas. - **Good** developed ideas using annotated sketches and plans.	**DESIGN:** -**Exceptional** research and investigation of Cams, gears and linkages. - **Comprehensively** explored the application of gears, cams and linkages in relation to toy design and movement required. - **Thoroughly** identified the needs and wants of user. - **Detailed** & **justified** specification to inform the design of **innovative**, functional and appealing products. - A variety of design approaches to generate **innovative** ideas and avoid stereotypical responses. - **Imaginative** developed ideas using annotated sketches and **detailed** plans.

Term 1b …Sustained project continued. Contextual Challenge Teenage Lifestyles mini makes. This project covers 3 half terms.	**MAKE:** - **Basic** use of specialist wood forming tools, techniques, processes, equipment and machinery. - **Limited** use of a range of wooden gears, cams and linkages considering their function and working properties - An overall **basic** quality and finish of products.	**MAKE:** - **Adequate** use of specialist wood forming tools, techniques, processes, equipment and machinery. - **Adequate** use of a wide range of wooden gears, cams and linkages considering their function and working properties - An overall **adequate** quality and finish of products.	**MAKE:** - **Good** use of specialist wood forming tools, techniques, processes, equipment and machinery **accurately**. - **Good** use of a wide range of **complex** wooden gears, cams and linkages considering their function and working properties. -- An overall **good** quality and finish of products.	**MAKE:** - **Exceptional** use of specialist wood forming tools, techniques, processes, equipment and machinery **precisely and accurately.** - **Exceptional** use of a wide range of **complex** wooden gears, cams and linkages considering their function and working properties. - An overall **exceptional** quality and finish of products.
Term 2a …Sustained project continued. Contextual Challenge Teenage Lifestyles mini makes. This project covers 3 half terms.	**TECHNICAL KNOWLEDGE:** - **Lacks** understanding of cams, gears and linkages, resistant materials and wood joining components Taking into consideration their function and working characteristics. - **Little or no** consideration for the impact designers, manufacturers and consumers have on the environment.	**TECHNICAL KNOWLEDGE:** - An **adequate** understanding of cams, gears and linkages, resistant materials and wood joining components Taking into consideration their function and working characteristics. - An **adequate** consideration for the impact designers, manufacturers and consumers have on the environment.	**TECHNICAL KNOWLEDGE:** - A **good** understanding of cams, gears and linkages, resistant materials and wood joining components Taking into consideration their function and working characteristics. - A **good** consideration for the impact designers, manufacturers and consumers have on the environment.	**TECHNICAL KNOWLEDGE:** - A **comprehensive** understanding of cams, gears and linkages, resistant materials and wood joining components Taking into consideration their function and working characteristics. - An **exceptional** consideration for the impact designers, manufacturers and consumers have on the environment.

	- **Limited Knowledge of the function and applications** of cams gears and linkages. To include necessary pivots and pins.. -**Brief** understanding of the classification of gears, cams and linkages **EVALUATE:** - **Limited** analysis of mechanisms from the past to inform design ideas. - **Basic** evaluation of card models of their mechanism designs and uses. - **Little or no** testing, evaluation and refinement of ideas and products against a specification, considering the views of intended users suitable for contextual challenge. - **Basis or no** understanding of developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.	- **Adequate Knowledge of the function and applications** of cams gears and linkages. To include necessary pivots and pins. -**Sufficient** understanding of the classification of gears, cams and linkages. **EVALUATE:** - **Adequate** analysis of mechanisms from the past to inform design ideas. - **Sufficient** evaluation of card models of their mechanism designs and uses.. - **Satisfactory** testing, evaluation and refinement of ideas and products against a specification, considering the views of intended users suitable for contextual challenge.	- **Good Knowledge of the function and applications** of cams gears and linkages. To include necessary pivots and pins. -**Good** understanding of the classification of gears, cams and linkages. **EVALUATE:** - **Good** analysis of mechanisms from the past to inform design ideas. - **Good** evaluation of card models of their mechanism designs and uses. - **Detailed** testing, evaluation and refinement of ideas and products against a specification, considering the views of intended users suitable for contextual challenge. - **Good** understanding of developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.	- **Exceptional Knowledge of the function and applications** of cams gears and linkages. To include necessary pivots and pins. -**Excellent** understanding of the classification of gears, cams and linkages. **EVALUATE:** - **Extensive** analysis of mechanisms from the past to inform design ideas. - **Excellent** evaluation of card models of their mechanism designs and uses. - **Comprehensive** testing, evaluation and refinement of ideas and products against a specification, considering the views of intended users suitable for contextual challenge. - **Exceptional** understanding of developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.

		- **Adequate** understanding of developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.		