

YEAR 8 DESIGN KNOWLEDGE ASSESSMENT GRID 2022-2023

FOUNDATION	
Health and Safety	Is able to follow the health and safety rules within the workshop environment with some support if needed.
Designing and Communicating	To be able to look at the work of a designer and give some simple description of her style.
	Can sketch 3-4 simple ideas using 2 or more materials. Some ideas will be feasible. Some ideas have been influenced by the designer.
	Design sketches are basic (with attempts at close-ups, 3D or exploded) with simple communication.
	Design thinking is explained with brief notes and few opinions.
	Can use 2D Cad with some support to draw simple casting designs for laser cutting
	Needs support and reminders to photograph and stick in photos of models. Some labelling of photos.
Practical skills, knowledge and accuracy	Is able to use hand tools and workshop equipment with some support following practice to safely produce a mostly complete or basic product.
	Understands with support how to achieve a high quality finish on pewter and the edges and surfaces of copper and aluminium.
	Has some understanding that metals fall into different categories.
	Can describe the basic properties of some of the materials used in class.
	Understands that the heat press can be used to print onto different materials.
	Understands that pewter casting can be used to reform the metal into another shape.
	With support can join different metals together using drilling and riveting.
	The final product is of adequate quality. With further improvements it will function.
Analysis and Evaluation	With support, can reflect on written, design and practical work identifying areas of strength and areas that could be improved.
	Can give simple peer feedback on written, design and practical work. This may need clarifying or support from the teacher.

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INTERMEDIATE

Health and Safety	Understands the health and safety rules within the workshop environment and is able to explain why they are required.
Designing and Communicating	<p>To be able to analyse the work of a designer and generate a range of words to describe her work.</p> <p>Can sketch 4-5 simple ideas using 2-3 materials. Materials have been specified according to their properties. Most ideas will be feasible. Most ideas have been influenced by the designer. There may be evidence of some design iteration across the sketches.</p> <p>Design sketches are communicated through sketches (sometimes close-ups, 3D or exploded) and good annotation.</p> <p>Design thinking is explained with brief explanations and some opinions both self and peer.</p> <p>Can use 2D CAD to draw their casting design for laser cutting. These designs may have been contoured from internet images.</p> <p>Is able to record design decisions through sketches, photos and screenshots of CAD work. This evidence is explained.</p>
Practical skills, knowledge and accuracy	<p>Is able to use hand tools and workshop equipment with some accuracy following practice to safely produce a completed product of reasonable quality.</p> <p>Understands and can demonstrate how to achieve a good quality finish on pewter and the edges and surfaces of copper and aluminium.</p> <p>Understands the different groups of metals. Can give some properties of the materials in each of the 3 groups.</p> <p>Can describe the properties of the materials used in class. Can suggest what some of the materials in class might be used for with support</p> <p>Understands that Dye Sublimation can be used to print images onto various materials.</p> <p>Understands that pewter casting can be used to reform the metal into another shape and how this can be used for recycling.</p> <p>Is able to join different metals together with some accuracy using drilling and riveting.</p> <p>The final product is of a good quality using a variety of materials. It is constructed effectively and functions appropriately.</p>
Analysis and Evaluation	<p>Can reflect on written, design and practical work identifying areas of strength and areas that could be improved.</p> <p>Can give simple peer feedback on written, design and practical work.</p>

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HIGHER

Health and Safety	Fully appreciates the health and safety rules within the workshop environment and is able to explain confidently why they are required.
Designing and Communicating	<p>To be able to analyse the work of a designer and generate a wide range of words to describe her style. Other styles and designers may also be referred to. Link to Emirati styles may also be made</p> <p>Can sketch 4-5 simple ideas using 2-3 materials with a good level of creativity Materials have been correctly specified according to their working and aesthetic properties. All ideas will be feasible. All ideas have been influenced by the designer. There is evidence of some iteration across the sketches</p> <p>Design sketches are well communicated through sketches (sometimes close-ups, 3D or exploded) and detailed annotation.</p> <p>There are good annotations with opinions and evaluations. They may have sought the opinions of others.</p> <p>Can use 2D CAD independently after a demonstration to sketch their design, refining if needed. These designs may have been contoured from internet images and there may be some layering of casting templates to create relief designs.</p> <p>Is able to record design decisions through sketches, photos and screenshots of CAD work independently as the unit progresses. Work is well annotated with perceptive reflections and evaluations.</p>
Practical skills, knowledge and accuracy	<p>Is able to use hand tools and workshop equipment with a good level of accuracy following practice to safely produce a completed product of good quality.</p> <p>Understands and can demonstrate how to achieve a high quality finish on pewter and the edges and surfaces of copper and aluminium.</p> <p>Fully understands the different groups of metals, and can give examples and some specific materials and properties for different materials in each group.</p> <p>Can describe the properties of the materials used in class and give simple applications for these materials.</p> <p>Understands the process of Dye Sublimation and how it can be used to print images onto polymers.</p> <p>Understands that pewter casting can be used to reform the metal into another shape and how this can be used for recycling. Understands the temperatures involved in commercial casting and how this can affect prices.</p> <p>Is able to join different metals together accurately using drilling and riveting.</p> <p>The final product is of a good quality using a variety of materials showing skill and accuracy. It is constructed effectively and functions well.</p>
Analysis and Evaluation	<p>Can reflect effectively on written, design and practical work identifying areas of strength and areas that could be improved. Is able to independently make improvements to their work as a result of these evaluations.</p> <p>Can give constructive peer feedback on written, design and practical work.</p>

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EXCEPTIONAL

Health and Safety	Fully appreciates the health and safety rules within the workshop environment and is able to confidently explain the hazards and risks presented.
Designing and Communicating	<p>To be able to analyse the work of a designer and generate a wide range of words to describe their style. To reflect on Emirati culture and make clear links and comparisons between the two styles.</p> <p>Can sketch 3-4 ideas linked to the brief with a very good level of creativity and some innovation.</p> <p>Can sketch 3-4 simple ideas with a good level of creativity to design a solution clearly linked to the design brief.</p> <p>Can sketch 4-5 simple ideas using 2-3 materials with a very good level of creativity and some innovation.</p> <p>All materials have been correctly specified according to their working and aesthetic properties.</p> <p>All ideas will be feasible.</p> <p>All ideas have been influenced by the designer, their style and other Emirati influences.</p> <p>There is evidence of clear design iteration across the sketches.</p> <p>Design sketches are thoroughly communicated through sketches (close-ups, 3D or exploded) and detailed annotation and explanations.</p> <p>There are very good annotations with opinions and evaluations. The opinions of others have been sought and have influenced the designs.</p> <p>Can use 2D CAD independently after a demonstration to sketch their design, refining and improving. These designs may have been contoured from internet images and there may be some layering of casting templates to create relief designs along with acrylic inserts.</p> <p>Is able to record design decisions through sketches, photos and screenshots of CAD work independently as the unit progresses. Work is well annotated with perceptive reflections and evaluations. Photos may be sketched upon and developed further to improve communication.</p>
Practical skills, knowledge and accuracy	<p>Is able to use hand tools and workshop equipment with precision following practice to safely produce a completed product of excellent quality.</p> <p>Understands and can demonstrate how to achieve a high quality finish on pewter and the edges and surfaces of copper and aluminium.</p> <p>Fully understands the different groups of metals, and can give examples and some specific materials and properties for different materials in each group. Can explain why different metal types are used for different applications based upon their properties and characteristics.</p> <p>Can describe the properties of the materials in each category and those used in class.</p> <p>Is able to explain applications for these materials and why those applications are suitable</p> <p>Understands the process of Dye Sublimation and how it can be used to print images onto polymers. Understands how non polymer materials can be printed on.</p> <p>Understands that pewter casting can be used to reform the metal into another shape and how this can be used for recycling. Understands the temperatures involved in commercial casting and how this can affect prices. Is aware of simpler manufacturing methods for metals and why they may be used instead of casting.</p> <p>Is able to join different metals together with accuracy and precision using drilling and riveting.</p> <p>The final product is of a high standard using a variety of materials showing skill and precision. It has flair and originality</p> <p>It is constructed effectively and functions very well.</p>
Analysis and Evaluation	<p>Consistently and effectively reflects on written, design and practical work identifying areas of strength and areas that could be improved. Is able to independently make improvements to their work as a result of these evaluations.</p> <p>Can give constructive and supportive peer feedback on written, design and practical work. Is able to support peers in achieving improvements to their work.</p>