



## Long-term Plan for Resistant Materials

2015-2016

Subject Leader: Shaun Stevens

YR 7	
Autumn	<p>[Title of unit] <b>Health and Safety in the Workshop</b></p> <p>[Length in weeks] <b>2 Weeks</b></p> <p>[Main focus] <b>This unit aims to introduce pupils to health and safety in the workshop, including potential hazards and risks, common basic safety signs, safe practices and protective equipment.</b></p> <p>[Assessment focus]</p> <ul style="list-style-type: none"><li>• <b>Understand the importance of health, safety and welfare in the workshop.</b></li><li>• <b>Identify potential hazards and risks in the workshop.</b></li><li>• <b>Recognise the common basic safety signs found in the workshop.</b></li><li>• <b>Demonstrate an awareness of safe practices and protective equipment.</b></li></ul>
	<p>[Title of unit] <b>Acrylic Photo Frames – Manufacturing using Plastics</b></p> <p>[Length in weeks] <b>12 Weeks</b></p> <p>[Main focus] <b>Students will work through the design process to manufacture a photo frame. The final product will be made from acrylic plastic and neoprene foam. This project serves as an introduction to smart materials and the use of strip heaters and common tools in resistant materials.</b></p> <p>[Assessment focus]</p> <ul style="list-style-type: none"><li>• <b>Pupils take users' views about aesthetic and technical issues into account as they respond to briefs.</b></li><li>• <b>Pupils develop ideas by drawing on and using various sources of information.</b></li><li>• <b>Pupils clarify their ideas through discussion, drawing and modelling, showing understanding of aesthetic and economic dimensions.</b></li></ul>



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	<ul style="list-style-type: none"><li>• Pupils communicate alternative ideas, using words, labelled sketches and models, showing that they are aware of constraints. They use some ideas from others' designing to inform their own work. They reflect on their designs as they develop, recognising the significance of knowledge and previous experience.</li><li>• Pupils produce step-by-step plans and then select and work with a range of tools and equipment.</li><li>• Pupils identify what is working well and what could be improved to overcome technical problems. They reflect on their designs as they develop, recognising the significance of knowledge and previous experience.</li><li>• Pupils select and work with a range of tools and equipment. They apply their knowledge and understanding of materials, ingredients and components, and work with them with some accuracy, paying attention to the quality of finish and to function. Pupils identify what is working well and what could be improved to overcome technical problems.</li></ul>
Spring	<p>[Title of unit] <b>Moisture Testers - Electronics</b></p> <p>[Length in weeks] <b>12 Weeks</b></p> <p>[Main focus] <b>The project is to design and produce an electronic moisture tester that could be used to monitor the hydration levels of house plants. The project will enable students to experience the design and manufacture of simple electronic circuits.</b></p> <p>[Assessment focus]</p> <ul style="list-style-type: none"><li>• Pupils generate ideas by collecting and using information.</li><li>• Pupils develop ideas by drawing on and using various sources of information. They respond to briefs showing understanding of how culture and society are reflected in familiar products when developing and communicating their own ideas. They show that they are aware of constraints as they apply knowledge and understanding of materials, ingredients and techniques. They use understanding of others' designing as they develop their work. They check their work as it develops, solve technical problems and show some evidence of creativity as they modify their approach in the light of progress.</li><li>• Pupils produce step-by-step plans and then select and work with a range of tools and equipment.</li></ul>



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|  | <ul style="list-style-type: none"><li>• Pupils test and evaluate their products showing that they understand the situations in which the products will have to function. They show that they are aware of constraints as they apply knowledge and understanding of materials, ingredients and techniques.</li><li>• Pupils select and work with a range of tools and equipment. They apply their knowledge and understanding of materials, ingredients and components, and work with them with some accuracy, paying attention to the quality of finish and to function. Pupils identify what is working well and what could be improved to overcome technical problems.</li></ul> |
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Summer	<p>[Title of unit] <b>Maori Mask Making</b></p> <p>[Length in weeks] <b>9 Weeks</b></p> <p>[Main focus] <b>The aim of this project is to explore how designs are affected by Maori culture and traditions. The end product is to produce an example of a Maori mask.</b></p> <p>[Assessment focus]</p> <ul style="list-style-type: none"><li>• <b>Pupils develop ideas by drawing on and using various sources of information.</b></li><li>• <b>Pupils clarify their ideas through discussion, drawing and modelling, showing understanding of aesthetic and economic dimensions.</b></li><li>• <b>Pupils develop ideas by drawing on and using various sources of information. They respond to briefs showing understanding of how culture and society are reflected in familiar products when developing and communicating their own ideas. They show that they are aware of constraints as they apply knowledge and understanding of materials, ingredients and techniques. They use understanding of others' designing as they develop their work. They check their work as it develops, solve technical problems and show some evidence of creativity as they modify their approach in the light of progress.</b></li><li>• <b>Pupils produce step-by-step plans and then select and work with a range of tools and equipment.</b></li><li>• <b>Pupils test and evaluate their products showing that they understand the situations in which the products will have to function. They show that they are aware of constraints as they apply knowledge and understanding of materials, ingredients and techniques.</b></li><li>• <b>Pupils select and work with a range of tools and equipment. They apply their knowledge and understanding of materials, ingredients and components, and work with them with some accuracy, paying attention to the quality of finish and to function. Pupils identify what is working well and what could be improved to overcome technical problems.</b></li></ul>
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