

PJS DT SKILL AND KNOWLEDGE PROGRESSION

Skills				
Strand	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas	<ul style="list-style-type: none"> -Create ideas for an item, considering the needs and wants of particular individuals and groups. -To order the main stages of making a product. -Identify the purpose of the product and establish design criteria. -Explain how well a product has been designed, what materials have been used and different construction techniques. -Make drawings with labels when designing 	<ul style="list-style-type: none"> -Create ideas and gather information about the needs and wants of consumers /users analysing features that will appeal to the target audience. - To order the main stages of making a product and develop a clear idea of what has to be done. -Identify the purpose of the product and establish a design criteria, planning how to use equipment, materials and processes. -To identify strengths of your design and an area for development. -Make labelled drawings from different views showing specific features 	<ul style="list-style-type: none"> -Create, model, develop and communicate ideas through a variety of annotated sketches. - Carry out research, using surveys, interviews, questionnaires and web-based resources. -Develop a clear idea of what has to be done, planning how to use materials and equipment. - Identify and describe the purpose of the product and establish a design criteria ,planning how to use appropriate materials, tools and techniques. - To identify strengths of your design and areas for development. -Use results of investigations, information sources, when developing design ideas. 	<ul style="list-style-type: none"> -Create, model, develop and communicate my ideas through prototypes and pattern pieces. - Carry out research, using surveys, interviews, questionnaires and web-based resources. -Develop a clear idea of what has to be done, planning how to use materials, equipment and processes. - Identify and describe the purpose of the product and establish a design criteria ,planning how to use appropriate materials, tools and techniques. - To use research to inform and develop the design of innovative, functional, appealing product that is fit for purpose.

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		<p>-To explain my choice of materials and components according to aesthetic and function.</p>	<p>-To start understanding how much products cost and how sustainable they are.</p>	<p>-To identify strengths and weaknesses and suggest alternative methods of making, if first attempt fails.</p> <p>-Use results of investigations, information sources, including web-based design when developing design ideas.</p> <p>-To explain the impact the product will have beyond their intended purpose.</p>
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<p>Working with tools, materials, equipment and components</p>	<ul style="list-style-type: none"> -To select a range of tools and techniques for making my product safely. -To explain choice of equipment and materials in relation to techniques and skills that will be used. -Select from and use finishing techniques suitable for the product they are creating. 	<ul style="list-style-type: none"> -Select and use appropriate tools to measure, mark out, cut, score, shape and combine with some accuracy related to their products. -Explain their choice of materials according to functional properties and aesthetic qualities. -Select from and use materials and components, including ingredients, construction and electrical components according to their function and properties. 	<ul style="list-style-type: none"> -Produce detailed lists of equipment and fabrics relevant to their tasks. -Write a step-by-step plan, including a list of resources required. -Select from and use, a range of appropriate utensils, tools and equipment accurately to measure and combine appropriate ingredients, materials and resources. 	<ul style="list-style-type: none"> -Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. -Competently select from and use appropriate tools to accurately measure, mark, cut and assemble materials, and securely connect electrical components to produce reliable, functional products. -Use finishing and decorative techniques suitable for the product they are designing and making.
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Evaluating	<ul style="list-style-type: none"> -Investigate a range of 3-D textile products, ingredients and lever and linkage products relevant to their project. -Test their product against the original design criteria and with the intended user. -Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. 	<ul style="list-style-type: none"> -Investigate and evaluate a range of products including the ingredients, materials, components and techniques that are used. -Test and evaluate their own products against design criteria and the intended user and purpose. -Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. 	<ul style="list-style-type: none"> -Investigate and analyse products linked to their final product. -Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. -Compare the final product to the original design specification and record the evaluations. -Consider the views of others to improve their work. 	<ul style="list-style-type: none"> -Continually evaluate and modify the working features of the product to match the initial design specification. -Test the product and systems system to demonstrate its effectiveness for the intended user and purpose - Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. -Test the system to demonstrate its effectiveness for the intended user and purpose. -Consider views of others to improve work and implement changes.
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Knowledge				
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Food and nutrition	<ul style="list-style-type: none"> - To prepare and cook a variety of dishes safely and hygienically, using a heat source where appropriate. -To begin to explore what a healthy diet is made up from. - Know about a range of fresh and processed ingredients appropriate for their product. -To begin to understand that drink and food provided energy needed for the body. 	<ul style="list-style-type: none"> - To prepare and cook a variety of dishes safely and hygienically, using a heat source where appropriate. - To begin to explain how a healthy diet is made up from a variety and balance of different foods. -Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. -To explain which foods and drink assist us in maintaining an active lifestyle. 	<ul style="list-style-type: none"> - To prepare and cook a variety of dishes safely and hygienically, using a heat source where appropriate. -To begin to understand about seasonality in relation to food products and the source of different food products. -To use a variety of techniques such as slicing, chopping, grating, mixing and kneading. - To explain which foods and drink assist us in maintaining a healthy, balanced lifestyle. 	<ul style="list-style-type: none"> - To prepare and cook a variety of dishes safely and hygienically, using a heat source where appropriate. -To explain how seasons affect food availability source of different food products. -To use a variety of techniques such as slicing, chopping, grating, mixing, kneading and baking. -To explain substances within different types of foods that are required to lead a healthy, balanced lifestyle.

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Structures	<ul style="list-style-type: none"> -Apply his/her understanding of how to strengthen, stiffen and reinforce more complex structures -Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. - Identify basic equipment, materials, components and techniques. 			<ul style="list-style-type: none"> -Apply his/her understanding of how to strengthen, stiffen and reinforce more complex structures and understand how to strengthen, stiffen and reinforce 3-D frameworks. - Understand the characteristics of different materials, components and processes -Understand a range of advanced/specialist techniques
Mechanisms		<ul style="list-style-type: none"> -Explore and use wheels, axles and axle holders. -Distinguish between fixed and freely moving axles. - Understand and use mechanical structures in his/her products using levers and linkages 	<ul style="list-style-type: none"> -Identify and describe appropriate, equipment, materials, components and techniques <p>Recognise that products/designs have to meet a range of different needs</p> <ul style="list-style-type: none"> -Understand and use mechanical structures in his/her products using cams and linkages 	

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Textiles	<ul style="list-style-type: none"> -Know how to strengthen, stiffen and reinforce existing fabrics. -Understand how to securely join two pieces of fabric together. -Understand the need for patterns and seam allowances. 		<ul style="list-style-type: none"> -Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics. -Understand how fabrics can be strengthened, stiffened and reinforced where appropriate. 	
Electrical Systems		<ul style="list-style-type: none"> -Understand and use electrical systems in their products linked to science coverage. -Apply their understanding of computing to program and control their products. - Understand and use electrical systems in his/her products e.g. series circuits incorporating switches, bulbs, buzzers and motors 		<ul style="list-style-type: none"> -Understand and use electrical systems in their products linked to science coverage. -Understand the characteristics of different materials, components, ingredients and processes -Understand a range of advanced/specialist techniques -Apply his/her understanding of computing to program, monitor and control his/her products - ICT link Understand and use electrical systems in his/her products e.g. series circuits incorporating switches, bulbs, buzzers and motors