

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.

PJS DT SKILL AND KNOWLEDGE PROGRESSION

-To explain my choice of materials and components according to aesthetic and function.

-To start understanding how much products cost and how sustainable they are.

-To identify strengths and weaknesses and suggest alternative methods of making, if first attempt fails.

-Use results of investigations, information sources, including web-based design when developing design ideas.

-To explain the impact the product will have beyond their intended purpose.

PJS DT SKILL AND KNOWLEDGE PROGRESSION

Working with tools, materials, equipment and components

-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.

-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.

-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.

-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.

PJS DT SKILL AND KNOWLEDGE PROGRESSION

Evaluating

-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.

-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.

-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.

-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.

PJS DT SKILL AND KNOWLEDGE PROGRESSION

Knowledge

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<p>Food and nutrition</p>	<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.

PJS DT SKILL AND KNOWLEDGE PROGRESSION

<p>Structures</p>	<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
<p>Mechanisms</p>		<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 Recognise that products/designs have to meet a range of different needs -Understand and use mechanical structures in his/her products using cams and linkages 	

PJS DT SKILL AND KNOWLEDGE PROGRESSION

<p>Textiles</p>	<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. 	
<p>Electrical Systems</p>		<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