

Design & Technology Skills Map

Year Group	Key Skills										
	Design	Make	Evaluate	Knowledge	Cooking & Nutrition						
1	 <u>begin to design</u> purposeful, functional, appealing products for themselves and other users based on design criteria; <u>begin to generate</u>, <u>develop</u>, <u>model</u> and <u>communicate</u> ideas through talking, drawing, templates, mock-ups and ICT, and where appropriate, information and communication technology; 	 <u>begin to select</u> from and <u>use</u> a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]; <u>begin to select</u> from and <u>use</u> a wide range of materials and components (including construction materials, textiles and ingredients, according to their characteristics); 	 <u>begin to explore</u> and <u>evaluate</u> a range of existing products; <u>begin to evaluate</u> their ideas and products against design criteria; 	 <u>begin to build</u> structures, exploring how they can be made stronger, stiffer and more stable; <u>begin to explore</u> and use mechanisms [for example, levers, sliders, wheels and axles], in their products; 	 <u>begin to use</u> the basic principles of a healthy and varied diet to prepare dishes; <u>begin to understand</u> where food comes from; 						

2	•	design purposeful, functional, appealing products for themselves and other users based on design criteria ; generate, develop, <u>model</u> and <u>communicate</u> ideas through talking, drawing, templates, mock-ups and ICT, and where appropriate, information and communication technology;	•	select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]; select from and use a wide range of materials and components (including construction materials, textiles and ingredients, according to their characteristics);	•	explore and evaluate a range of existing products; evaluate their ideas and products against design criteria;	•	build structures, exploring how they can be made stronger, stiffer and more stable; <u>explore</u> and use mechanisms [for example, levers, sliders, wheels and axles], in their products ;	•	<u>use</u> the basic principles of a healthy and varied diet to <u>prepare</u> dishes; <u>understand</u> where food comes from;
3	•	<u>begin to use</u> research and	•	<u>begin to select</u> from and use a wider range	•	<u>begin to investigate</u> and analyse a range	•	<u>begin to apply</u> their understanding of how	•	begin to understand and <u>apply</u> the principles of a healthy and varied
		develop design		of tools and equipment		of existing products:		to strengthen . stiffen		diet:
		criteria to inform		to perform practical	•	begin to evaluate		and reinforce more	•	begin to prepare and cook a
		the design of		tasks [for example,		their ideas and		complex structures;		variety of predominantly sayoury
		innovative,		cutting, shaping,		products against	•	begin to understand		dishes using a widening range of
		functional,		joining and finishing]		their own design		and use mechanical		cooking techniques;
		appealing products		with increasing		criteria and consider		systems in their	•	begin to understand seasonality
		that are fit for		accuracy;		the views of others		products [for example,		and <u>know</u> where and how a
		purpose and aimed	٠	begin to select from		to <u>improve</u> their		gears, pulleys, cams,		variety of ingredients are grown,
		at particular		and <u>use</u> a wider range		work;		levers and linkages];		reared, caught and processed;
		individuals or		of materials and	•	begin to understand	•	begin to understand		
		groups;		components, including		how key events and		and <u>use</u> electrical		
	•	begin to generate,		construction materials,		individuals in design		systems in their		
		develop, model and		textiles and		and technology have		products [for example,		
		<u>communicate</u> their		ingredients, <u>according</u>		helped shape the		series circuits		
		ideas through		to their functional		world;		incorporating switches,		
		discussion,		properties and				bulbs, buzzers and		
		annotated		aesthetic qualities;				motors];		
		sketcnes, cross-					•	begin to apply their		
		sectional and						understanding of		

	exploded diagrams, prototypes, pattern pieces and computer-aided			computing to <u>program</u> , <u>monitor</u> and <u>control</u> their products;	
4	 gain more confidence to <u>use</u> research and <u>develop</u> design criteria to inform the design of innovative, functional, appealing products that are fit for purpose and aimed at particular individuals or groups; gain more confidence to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross- sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (CAD); 	 gain more confidence to <u>select</u> from and <u>use</u> a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] with increasing accuracy; gain more confidence to <u>select</u> from and <u>use</u> a wider range of materials and components, including construction materials, textiles and ingredients, <u>according</u> to their functional properties and aesthetic qualities; 	 gain more confidence to investigate and analyse a range of existing products; gain more confidence to evaluate their ideas and products against their own design criteria and consider the views of others to improve their work; gain more proficient to <u>understand</u> how key events and individuals in design and technology have helped shape the world; 	 gain more confidence to <u>apply</u> their <u>understanding</u> of how to strengthen, stiffen and reinforce more complex structures; gain more confidence in <u>understanding</u> and <u>useing</u> mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]; gain more proficient to <u>understand</u> and <u>use</u> electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]; gain more confidence to <u>apply</u> their understanding of computing to <u>program</u>, <u>monitor</u> and <u>control</u> their products; 	 gain more confidence in <u>understanding</u> and <u>applying</u> the principles of a healthy and varied diet; gain more confidence to prepare and <u>cook</u> a variety of predominantly savoury dishes using a widening range of cooking techniques; <u>expand the understanding</u> of seasonality and <u>knowing</u> where and how a variety of ingredients are grown, reared, caught and processed;

5	•	<u>use</u> research and <u>develop</u> design criteria to inform the design of innovative, functional, appealing products that are fit for purpose and aimed at particular individuals or groups; generate, develop, model and communicate their ideas through discussion, annotated sketches, cross- sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (CAD);	•	select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] with increasing accuracy ; <u>select</u> from and <u>use</u> a wider range of materials and components, including construction materials, textiles and ingredients, <u>according</u> to their functional properties and aesthetic qualities ;	•	investigate and analyse a range of existing products; evaluate their ideas and products against their own design criteria and consider the views of others to improve their work; understand how key events and individuals in design and technology have helped shape the world;	•	apply their understanding of how to strengthen, stiffen and reinforce more complex structures; understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]; understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]; apply their understanding of computing to program, monitor and control their products;	•	understand and apply the principles of a healthy and varied diet; prepare and cook a variety of predominantly savoury dishes using a widening range of cooking techniques; understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed;
6	•	deepen the skills to <u>use</u> research and <u>develop</u> design criteria to inform the design of innovative, functional, appealing products that are fit for purpose and aimed at particular individuals or groups;	•	deepen the skills to <u>select</u> from and <u>use</u> a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] with increasing accuracy; deepen the skills to <u>select</u> from and <u>use</u> a wider range of materials and	•	deepen the skills to investigate and analyse a range of existing products; deepen the skills to evaluate their ideas and products against their own design criteria and consider the views of others to improve their work; deepen their	•	deepen the skills to <u>apply</u> their <u>understanding</u> of how to strengthen, stiffen and reinforce more complex structures; deepen the skills to <u>understand</u> and <u>use</u> mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages];	•	deepen the skills to <u>understand</u> and <u>apply</u> the principles of a healthy and varied diet; deepen the skills to <u>prepare</u> and <u>cook</u> a variety of predominantly savoury dishes using a widening range of cooking techniques; deepen their <u>understanding</u> of seasonality and <u>knowing</u> where and how a variety of ingredients are grown, reared, caught and processed;

• deepen the skills to	components, including	<u>understanding</u> of	•	deepen the skills to	
<u>generate</u> , <u>develop</u> ,	construction materials,	how key events and		understand and use	
<u>model</u> and	textiles and	individuals in design		electrical systems in	
<u>communicate</u> their	ingredients, according	and technology have		their products [for	
ideas through	to their functional	helped shape the		example, series circuits	
discussion,	properties and	world;		incorporating switches,	
annotated	aesthetic qualities;			bulbs, buzzers and	
sketches, cross-				motors];	
sectional and			•	deepen the skills to	
exploded diagrams,				apply their	
prototypes, pattern				understanding of	
pieces and				computing to program,	
computer-aided				monitor and control	
design (CAD);				their products;	