D.T. Assessment Document	
Essential Opportunities Key Stage 1	Essential Opportunities Key Stage 2
Design-design purposeful, functional, appealing products for themselves and other users based on design criteria -generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology **Make** -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 **Evaluate-**explore and evaluate a range of existing products -evaluate their ideas and products against design criteria **Technical knowledge** -build structures, exploring how they can be made stronger, stiffer and more stable -explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. **Cooking and Nutrition**-use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from.	**Design**-use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, 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 **Make**-select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately -select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities **Evaluate**-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 **Technical knowledge-**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. **Cooking and nutrition-** understand and apply the principles of a healthy and varied diet - prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Essential Learning Objectives		End of Year 1	End of Year 2	End of Year 3	End of Year 4	End of Year 5	End of Year 6
Core Skills	Design	-Design purposeful, functional, appealing products for themselves and other users based on design criteria. - Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.	-Design purposeful, functional, appealing products for themselves and other users based on design criteria. - Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology.	- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, 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.	- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, 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.	- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, 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.	- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, 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.
	Make	- 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.	- 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.	- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. - Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.	- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. - Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.	- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. - Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.	- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. - Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.
	Evaluate	- Explore and evaluate a range of existing products. -Evaluate their ideas and products against design criteria.	- Explore and evaluate a range of existing products. -Evaluate their ideas and products against design criteria.	- 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.	- 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.	- 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.	- 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.
	Technical Knowledge	- Build structures, exploring how they can be made stronger, stiffer and more stable. -Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	- Build structures, exploring how they can be made stronger, stiffer and more stable. -Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	- 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 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 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,	- 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,

				- Apply their understanding of computing to	- Apply their understanding of computing to	bulbs, buzzers and motors]. - Apply their understanding of computing to program, monitor and control their products.	bulbs, buzzers and motors]. - Apply their understanding of computing to program, monitor and control their products.
	Cooking and Nutrition	- Use basic principles of a healthy and varied diet to prepare dishes. - Understand where food comes from.	- Use basic principles of a healthy and varied diet to prepare dishes. - Understand where food comes from.	- Understand and apply principles of a healthy and varied diet. - Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques. -Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.	- Understand and apply principles of a healthy and varied diet. - Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques. -Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.	- Understand and apply principles of a healthy and varied diet. - Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques. -Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	- Understand and apply principles of a healthy and varied diet. - Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques. -Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.
	Structures	-Describing the purpose of structures, including windmills -Learning how to turn 2D nets into 3D structures -Learning that the shape of materials can be changed to improve the strength and stiffness of structures -Understanding that cylinders are a strong type of structure that are often used for windmills and lighthouses -Understanding that windmill turbines use wind to turn and make the machines inside work -Understanding that axles are used in structures and mechanisms to make parts turn in a circle -Developing awareness of different structures for different purposes	-Identifying natural and man-made structures -Identifying when a structure is more or less stable than another -Knowing that shapes and structures with wide, flat bases or legs are the most stable -Understanding that the shape of a structure affects its strength -Using the vocabulary: strength, stiffness and stability -Knowing that materials can be manipulated to improve strength and stiffness -Building a strong and stiff structure by folding paper	-Identifying features of a castle -Identifying suitable materials to be selected and used for a castle, considering weight, compression, tension -Extending the knowledge of wide and flat based objects are more stable -Understanding the terminology of strut, tie, span, beam -Understanding the difference between frame and shell structure	-Learning what pavilions are and their purpose Building on prior knowledge of net structures and broadening knowledge of frame structures -Learning that architects consider light, shadow and patterns when designing -Implementing frame and shell structure knowledge -Considering effective and ineffective designs	-Exploring how to create a strong beam -Identifying arch and beam bridges and understanding the terms: compression and tension -Identifying stronger and weaker structures -Finding different ways to reinforce structures -Understanding how triangles can be used to reinforce bridges -Articulating the difference between beam, arch, truss and suspension bridges	-Knowing that structures can be strengthened by manipulating materials and shapes -Identifying the shell structure in everyday life (cars, aeroplanes, tins, cans) -Understanding man-made and natural structures
	Mechanisms and mechanical systems	Describing the purpose of structures, including windmills -Learning how to turn 2D nets into 3D structures -Learning that the shape of materials can be changed to improve the strength and stiffness of structure -Understanding that cylinders are a strong type of structure that are often used for windmills and lighthouses -Understanding that windmill turbines use wind to turn and make the machines inside work -Understanding that axles are used in structures and mechanisms to make parts turn in a circle -Developing awareness of different structures for different purposes	-Identifying natural and man-made structures -Identifying when a structure is more or less stable than another -Knowing that shapes and structures with wide, flat bases or legs are the most stable -Understanding that the shape of a structure affects its strength -Using the vocabulary: strength, stiffness and stability -Knowing that materials can be manipulated to improve strength and stiffness -Building a strong and stiff structure by folding paper	-Identifying features of a castle -Identifying suitable materials to be selected and used for a castle, considering weight, compression, tension -Extending the knowledge of wide and flat based objects are more stable -Understanding the terminology of strut, tie, span, beam -Understanding the difference between frame and shell structure	-Learning what pavilions are and their purpose -Building on prior knowledge of net structures and broadening knowledge of frame structures -Learning that architects consider light, shadow and patterns when designing -Implementing frame and shell structure knowledge -Considering effective and ineffective designs	-Exploring how to create a strong beam -Identifying arch and beam bridges and understanding the terms: compression and tension -Identifying stronger and weaker structures -Finding different ways to reinforce structures -Understanding how triangles can be used to reinforce bridges -Articulating the difference between beam, arch, truss and suspension bridges	-Knowing that structures can be strengthened by manipulating materials and shapes -Identifying the shell structure in everyday life (cars, aeroplanes, tins, cans) -Understanding man-made and natural structures
	Working Towards Expected						
	Working at Expected						