KEY STAGE 2 DT CYCLE A			
	AUTUMN Food	**SPRING Structures**	**SUMMER Electrical systems**
Product	Pizza	Bridge	Game involving light or buzzer
User	School children	Bridge designer.	Key Stage One Children
Purpose	A healthy school dinner linked to Jamie Oliver's healthy schools initiative.	To create a strong bridge which could be used as a prototype for a new crossing over the River Yarrow.	To use a game linked to an area of the curriculum.
LKS2	▸ Follow instructions / recipes. ▸ Join and combine a range of ingredients. ▸ Begin to understand the food groups on the *Eatwell Plate*. ▸ Understand seasonality. ▸ Know where and how ingredients are reared and caught. ▸ Prepare and cook using different cooking techniques.	▸ Plan a sequence of actions to make a product. ▸ Think ahead about the order of their work and decide upon tools and materials. ▸ Propose realistic suggestions as to how they can achieve their design ideas. ▸ Record the plan by drawing using annotated sketches. ▸ Select from a range of tools for cutting, shaping, joining and finishing. ▸ Use tools with accuracy. ▸ Identify the strengths and weaknesses of their design ideas in relation to purpose / user. ▸ Strengthen frames with diagonal struts. ▸ Measure and mark square section, strip and dowel accurately to 1cm.	▸ Develop more than one design or adaptation of an initial design. ▸ Use prototypes to develop and share ideas. ▸ Consider aesthetic qualities of materials chosen. ▸ Select from materials according to their functional properties. ▸ Investigate similar products to the one to be made to give starting points for a design. ▸ Consider and explain how the finished product could be improved. ▸ Discuss how well the finished product meets the user's design criteria. ▸ Incorporate a circuit into a model. ▸ Use electrical systems such as switches bulbs and buzzers.
UKS2	▸ Join and combine a widening range of ingredients. ▸ Select and prepare foods for a particular purpose. ▸ Know where and how ingredients are grown and processed. ▸ Understand and apply the principles of a healthy and varied diet. ▸ Choose ingredients to support healthy eating choices when designing their food products. ▸ Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques.	▸ Record ideas using annotated diagrams. ▸ Use models, kits and drawings to help formulate design ideas. ▸ Plan the sequence of work. ▸ Devise step by step plans which can be read / followed by someone else. ▸ Make prototypes. ▸ Use researched information to inform decisions. ▸ Identify the strengths and weaknesses of their design ideas. ▸ Report using correct technical vocabulary. ▸ Cut strip wood, dowel, square section wood accurately to 1mm. ▸ Build frameworks to support mechanisms. ▸ Stiffen and reinforce complex structures.	▸ Sketch and model alternative ideas. ▸ Decide which design idea to develop. ▸ Use exploded diagrams and cross-sectional diagrams to communicate ideas. ▸ Produce detailed lists of ingredients / components / materials and tools. ▸ Refine their product – review and rework / improve. ▸ Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. ▸ Use electrical systems such as motors and switches.
KEY FIGURE	Jamie Oliver- research into healthy dinner initiative.	Isambard Kingdom Brunel bridge builder	James Dyson inventions including vacuum and ventilators during coronavirus.

KEY STAGE 2 DT CYCLE B			
	AUTUMN Food	**SPRING Mechanical systems- levers and linkages.**	**SUMMER textiles**
Product	Bread.	Moving picture or book.	Dementia twiddle muff
User	Family during world war celebrations.	Teacher to demonstrate the planets or how shadows are formed.	Person with dementia.
Purpose	Celebration following rations after the war.	To create a moving poster or book to help a teacher.	Muff containing fiddle toys to keep hands active and busy.
LKS2	▸ Follow instructions / recipes. ▸ Join and combine a range of ingredients. ▸ Begin to understand the food groups on the *Eatwell Plate*. ▸ Understand seasonality. ▸ Know where and how ingredients are reared and caught. ▸ Prepare and cook using different cooking techniques.	▸ Develop more than one design or adaptation of an initial design. ▸ Use prototypes to develop and share ideas. ▸ Consider aesthetic qualities of materials chosen. ▸ Select from materials according to their functional properties. ▸ Investigate similar products to the one to be made to give starting points for a design. ▸ Consider and explain how the finished product could be improved. ▸ Discuss how well the finished product meets the user's design criteria. ▸ Use linkages to make movement larger or more varied.	▸ Plan a sequence of actions to make a product. ▸ Think ahead about the order of their work and decide upon tools and materials. ▸ Propose realistic suggestions as to how they can achieve their design ideas. ▸ Record the plan by drawing using annotated sketches. ▸ Prepare pattern pieces as templates for their design. ▸ Understand seam allowance. ▸ Sew on buttons and make loops.
UKS2	▸ Join and combine a widening range of ingredients. ▸ Select and prepare foods for a particular purpose. ▸ Know where and how ingredients are grown and processed. ▸ Understand and apply the principles of a healthy and varied diet. ▸ Choose ingredients to support healthy eating choices when designing their food products. ▸ Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques.	▸ Sketch and model alternative ideas. ▸ Decide which design idea to develop. ▸ Use exploded diagrams and cross-sectional diagrams to communicate ideas. ▸ Produce detailed lists of ingredients / components / materials and tools. ▸ Refine their product – review and rework / improve. ▸ Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. ▸ Use mechanical systems such as cams, pulleys and gears.	▸ Record ideas using annotated diagrams. ▸ Use models, kits and drawings to help formulate design ideas. ▸ Plan the sequence of work. ▸ Devise step by step plans which can be read / followed by someone else. ▸ Make prototypes. ▸ Use researched information to inform decisions. ▸ Identify the strengths and weaknesses of their design ideas. ▸ Create 3D textile products using pattern pieces. ▸ Understand pattern layout with textiles.
KEY FIGURE	Warburton's bread company.	Mary Elizabeth Anderson inventor of the windshield wiper	Victoria Jenkins founder of Unhidden clothing company for accessible clothing items.

KEY STAGE 2 DT CYCLE C			
	AUTUMN Electrical systems.	**SPRING Food**	**SUMMER Structures**
Product	Night light	Hidden vegetable pasta sauce	Bird house
User	Child who is afraid of the dark.	Child who won't eat vegetables	Birds in the school environment.
Purpose	Help a child feel safe in the dark.	To ensure the child eats a balanced diet using seasonal produce.	To provide a safe space the birds to nest and feed.
LKS2	▸ Develop more than one design or adaptation of an initial design. ▸ Use prototypes to develop and share ideas. ▸ Consider aesthetic qualities of materials chosen. ▸ Select from materials according to their functional properties. ▸ Investigate similar products to the one to be made to give starting points for a design. ▸ Consider and explain how the finished product could be improved. ▸ Discuss how well the finished product meets the user's design criteria. ▸ Incorporate a circuit into a model. ▸ Use electrical systems such as switches bulbs and buzzers.	▸ Follow instructions / recipes. ▸ Join and combine a range of ingredients. ▸ Begin to understand the food groups on the *Eatwell Plate*. ▸ Understand seasonality. ▸ Know where and how ingredients are reared and caught. ▸ Prepare and cook using different cooking techniques.	▸ Plan a sequence of actions to make a product. ▸ Think ahead about the order of their work and decide upon tools and materials. ▸ Propose realistic suggestions as to how they can achieve their design ideas. ▸ Record the plan by drawing using annotated sketches. ▸ Select from a range of tools for cutting, shaping, joining and finishing. ▸ Use tools with accuracy. ▸ Identify the strengths and weaknesses of their design ideas in relation to purpose / user. ▸ Strengthen frames with diagonal struts. ▸ Measure and mark square section, strip and dowel accurately to 1cm.
UKS2	▸ Sketch and model alternative ideas. ▸ Decide which design idea to develop. ▸ Use exploded diagrams and cross-sectional diagrams to communicate ideas. ▸ Produce detailed lists of ingredients / components / materials and tools. ▸ Refine their product – review and rework / improve. ▸ Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. ▸ Use electrical systems such as motors and switches.	▸ Join and combine a widening range of ingredients. ▸ Select and prepare foods for a particular purpose. ▸ Know where and how ingredients are grown and processed. ▸ Understand and apply the principles of a healthy and varied diet. ▸ Choose ingredients to support healthy eating choices when designing their food products. ▸ Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques.	▸ Record ideas using annotated diagrams. ▸ Use models, kits and drawings to help formulate design ideas. ▸ Plan the sequence of work. ▸ Devise step by step plans which can be read / followed by someone else. ▸ Make prototypes. ▸ Use researched information to inform decisions. ▸ Identify the strengths and weaknesses of their design ideas. ▸ Report using correct technical vocabulary. ▸ Cut strip wood, dowel, square section wood accurately to 1mm. ▸ Build frameworks to support mechanisms. ▸ Stiffen and reinforce complex structures.
KEY FIGURE	Tesla	Heston Blumenthal.	Zaha Hadid building designs.

KEY STAGE 2 DT CYCLE D			
	AUTUMN Food.	**SPRING Textiles**	**SUMMER Mechanical systems- CAMS**
Product	Soup	Bug repellent carrier	Moving toy
User	Person with diabetes	Amazon jungle explorer	Young child
Purpose	To provide a healthy snack which a person with diabetes can eat using seasonal produce.	To provide a holder for big repellent for an adventure in the Amazon forest.	To create a moving toy to appeal to a young child.
LKS2	▸ Follow instructions / recipes. ▸ Join and combine a range of ingredients. ▸ Begin to understand the food groups on the *Eatwell Plate*. ▸ Understand seasonality. ▸ Know where and how ingredients are reared and caught. ▸ Prepare and cook using different cooking techniques.	▸ Plan a sequence of actions to make a product. ▸ Think ahead about the order of their work and decide upon tools and materials. ▸ Propose realistic suggestions as to how they can achieve their design ideas. ▸ Record the plan by drawing using annotated sketches. ▸ Prepare pattern pieces as templates for their design. ▸ Understand seam allowance. ▸ Sew on buttons and make loops.	▸ Develop more than one design or adaptation of an initial design. ▸ Use prototypes to develop and share ideas. ▸ Consider aesthetic qualities of materials chosen. ▸ Select from materials according to their functional properties. ▸ Investigate similar products to the one to be made to give starting points for a design. ▸ Consider and explain how the finished product could be improved. ▸ Discuss how well the finished product meets the user's design criteria. ▸ Use linkages to make movement larger or more varied.
UKS2	▸ Join and combine a widening range of ingredients. ▸ Select and prepare foods for a particular purpose. ▸ Know where and how ingredients are grown and processed. ▸ Understand and apply the principles of a healthy and varied diet. ▸ Choose ingredients to support healthy eating choices when designing their food products. ▸ Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques.	▸ Record ideas using annotated diagrams. ▸ Use models, kits and drawings to help formulate design ideas. ▸ Plan the sequence of work. ▸ Devise step by step plans which can be read / followed by someone else. ▸ Make prototypes. ▸ Use researched information to inform decisions. ▸ Identify the strengths and weaknesses of their design ideas. ▸ Create 3D textile products using pattern pieces. ▸ Understand pattern layout with textiles.	▸ Sketch and model alternative ideas. ▸ Decide which design idea to develop. ▸ Use exploded diagrams and cross-sectional diagrams to communicate ideas. ▸ Produce detailed lists of ingredients / components / materials and tools. ▸ Refine their product – review and rework / improve. ▸ Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. ▸ Use mechanical systems such as cams, pulleys and gears.
KEY FIGURE	Hugh Fearnley-Whittingstall	Fred Perry	Lego toy designer.