

## DT Knowledge overview

	Design			Make			Evaluate			Technical knowledge		
	M	M/E	E	M	M/E	E	M	M/E	E	M	M/E	E
<p>Cycle 1 Autumn</p> <p><b>Come and Play</b></p>	<p><b>Materials: Textiles and paper.</b> Design a functional product based on design criteria. Communicate some simple design preferences.</p>	<p><b>Materials: Textiles and paper.</b> Help design a product based on a set criteria. Make a choice about their design when given options.</p>	<p><b>Materials: Textiles and paper.</b> Make a simple product alongside an adult by following a set plan.</p>	<p><b>Skills: Joining with glue.</b> Select and use an appropriate tool from a small selection of tools to complete their design. Select an appropriate material or component from a small selection to make their design.</p>	<p><b>Skills: Joining with glue.</b> Use an appropriate tool to complete their design, with support. Use appropriate material or components to make their design.</p>	<p><b>Skills: Joining with glue.</b> Use an appropriate tool with adult support to complete their design. Use appropriate material to make their design.</p>	<p>Give a personal opinion about an existing product (product linked to design criteria).</p>	<p>Make a preference about a product or component from a small number of options (product linked to design criteria).</p>	<p>Touch and feel an existing product (product linked to design criteria).</p>	<p>Identify if parts of their design should be made stronger, stiffer or more stable.</p>	<p>Identify, with support, if parts of their design should be made stronger, stiffer or more stable.</p>	<p>Explore the touch and feel of different textiles materials.</p>
<p>Cycle 1 Spring</p> <p><b>Home Sweet Home</b></p>	<p><b>Materials: Card and paper.</b> Design an appealing product based on design criteria. Communicate their design ideas through drawing a simple design.</p>	<p><b>Materials: Card and paper.</b> Help design a product based on design criteria. Select a design to make when given a small selection to choose from.</p>	<p><b>Materials: Card and paper.</b> Make a simple product alongside an adult by following a set plan.</p>	<p><b>Skills: Cutting and joining with glue and Sellotape.</b> Select and use an appropriate tool to perform a practical task from a selection of different tools. Select the appropriate material to perform a practical task from a selection of different materials or components.</p>	<p><b>Skills: Cutting and joining with glue and Sellotape.</b> Use a different, appropriate tool to perform a practical task to complete their design with support. Use a different, appropriate material or components to make their design.</p>	<p><b>Skills: Cutting and joining with glue and Sellotape.</b> Use an appropriate tool with adult support to complete their design. Use appropriate material to make their design.</p>	<p>Make a simple description about an existing product or component.</p>	<p>Give a personal opinion about an existing product or component (product linked to design criteria).</p>	<p>Touch and feel a different existing product (product linked to design criteria).</p>	<p>Select the most appropriate way they could strengthen their design from a range of choices.</p>	<p>Select the most appropriate way they could strengthen their design from two choices.</p>	<p>Explore the touch and feel of different paper and card design materials.</p>
<p>Cycle 1 Summer</p> <p><b>People Who Help Us</b></p>	<p><b>Materials: Wooden sticks and card.</b> Design a functional product for others, based on design criteria. Begin to generate some design ideas with support.</p>	<p><b>Materials: Wooden sticks and card.</b> Help design a product for others, based on design criteria. Begin to communicate some simple design choices.</p>	<p><b>Materials: Wooden sticks and card.</b> Make a simple product alongside an adult by following a set plan.</p>	<p><b>Skills: Cutting and joining with glue.</b> Select and use appropriate tools to perform a practical task from a selection of tools. Select the appropriate material to perform a practical task from a selection of different materials or components.</p>	<p><b>Skills: Cutting and joining with glue.</b> Use a different, appropriate tool to perform a practical task to complete their design. Use a different, appropriate material or components to make their design.</p>	<p><b>Skills: Joining with glue.</b> Use appropriate tools with adult support to complete their design. Use appropriate materials to make their design.</p>	<p>Begin to make a simple comments about the design of an existing product.</p>	<p>Give a simple description about an existing product or component.</p>	<p>Begin to make preferences about materials (linked to design criteria).</p>	<p>Use materials and techniques to make their design stronger, stiffer or more stable, with support.</p>	<p>Identify when a design has been made stronger, stiffer or more stable.</p>	<p>Explore the touch and feel of contrasting design materials.</p>

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<p>Cycle 2 Autumn</p> <p><b>Splish, Splash, Splosh.</b></p>	<p><b>Materials: Textiles paper and card.</b> Design an appealing product for themselves, based on design criteria. Generate some simple ideas for their design.</p>	<p><b>Materials: Textiles paper and card.</b> Contribute to the design of a product for themselves, based on design criteria. Communicate simple design choices.</p>	<p><b>Materials: Textiles paper and card.</b> Make a simple product alongside an adult based on a design criteria.</p>	<p><b>Skills: Cutting and joining with glue and Sellotape. Finishing with colours.</b> Use tools to perform a practical task. Use materials or components to make their design.</p>	<p><b>Skills: Cutting and joining with glue and Sellotape. Finishing with colours.</b> Use appropriate tools to perform a practical task to complete their design. Use appropriate materials or components to make their design.</p>	<p><b>Skills: Cutting and joining with glue and Sellotape. Finishing with colours.</b> Use an appropriate tool with adult support to complete their design. Use appropriate material to make their design.</p>	<p>Begin to make a simple comments about the design of an existing product.</p>	<p>Give a description about an existing product.</p>	<p>Begin to make preferences about components (linked to design criteria).</p>	<p>Explore how simple mechanisms can be used in designs to make things move. <b>Explore how sliders could be used in their designs.</b></p>	<p>Use simple mechanisms to make things move.  <b>Use sliders to make things move in their designs.</b></p>	<p>Explore a range of products with moving parts.  <b>Explore games, toys and products which use sliders to make things move.</b></p>
<p>Cycle 2 Spring</p> <p><b>Our Local Area</b></p>	<p><b>Materials: Paper, card and wood.</b> Design a purposeful product for themselves based on a design criteria. Begin to develop their ideas for a design with support.</p>	<p><b>Materials: Paper, card and wood.</b> Contribute to the design of a product for themselves, based on design criteria. Communicate their design ideas through drawing a simple design.</p>	<p><b>Materials: Paper, card and wood.</b> Make a simple product based on set criteria, with support.</p>	<p><b>Skills: Cutting and shaping. Finishing with colours.</b> Select and use a range of tools to perform a practical task. Use a range of materials and components make their design.</p>	<p><b>Skills: Cutting and shaping. Finishing with colours.</b> Use a range of tools to perform a practical task. Use a range of tools to make their design.</p>	<p><b>Skills: Cutting and shaping. Finishing with colours.</b> Use an appropriate tool to complete their design. Use appropriate material to make their design</p>	<p>Make a comment on their completed design.</p>	<p>Give a description about their completed design.</p>	<p>Begin to make preferences about materials and components (linked to design criteria).</p>	<p>Select the most appropriate mechanism which could be used in their design from a range of choices. <b>Explore how levers could be used in their designs.</b></p>	<p>Use simple mechanisms to make things move.  <b>Use levers to make things move in their designs.</b></p>	<p>Explore a range of products with moving parts.  <b>Explore games, toys and products which use levers to make things move.</b></p>
<p>Cycle 2 Summer</p> <p><b>Journeys</b></p>	<p><b>Materials: Paper, card, wood and axles.</b> Design a purposeful product for someone, based on a design criteria. Develop their ideas for a design.</p>	<p><b>Materials: Paper, card, wood and axles.</b> Contribute to the design of a product for someone, based on design criteria. Generate some simple ideas for their design.</p>	<p><b>Materials: Paper, card, wood and axles.</b> Make a simple product for someone else, based on set criteria and with support.</p>	<p><b>Skills: Shaping. Finishing with colours.</b> Use a range of materials or components to make their design, with support. Use a range of materials, components and mechanisms to make their design.</p>	<p><b>Skills: Cutting and shaping. Finishing with colours. Using mechanisms in their design.</b> Use a range of tools to perform a practical task, with increasing accuracy. Use a range of tools and mechanisms to make their design.</p>	<p><b>Skills: Cutting and shaping. Finishing with colours.</b> Use an appropriate tool to complete their design. Use a range of materials and a mechanism to make their design.</p>	<p>Make a simple evaluation about their finished product.</p>	<p>Make a simple comment about the function of their product.</p>	<p>Demonstrate the mechanism within their completed product.</p>	<p>Plan to use a mechanism in their design. <b>Axles. (can also incorporate levers and sliders)</b></p>	<p>Use a mechanism in their final product.  <b>Axles.</b></p>	<p>Explore a range of products with wheels.  <b>Explore toys and products with wheels.</b></p>
<p>Cycle 3 Autumn</p> <p><b>Once upon a time</b></p>	<p><b>Materials: Textiles and paper.</b> Develop a functional design based on design criteria. Generate their ideas through discussion.</p>	<p><b>Materials: Textiles and paper.</b> Develop a design based on design criteria. Generate some simple ideas for their design.</p>	<p><b>Materials: Textiles and paper.</b> Contribute to a simple design. Make a choice about their design when given options.</p>	<p><b>Skills: Joining. Finishing with colours.</b> Select from a range of tools to perform practical tasks. Select from a range of materials to</p>	<p><b>Skills: Joining. Finishing with colours.</b> Select the most appropriate tool from a choice tools to perform practical tasks. Select the most appropriate</p>	<p><b>Skills: Joining. Finishing with colours.</b> Use an increasing range of appropriate tools to complete their design. Use an increasing range of</p>	<p>Explain the function of an existing product.</p>	<p>Select the most appropriate product for a given task.</p>	<p>Demonstrate the function of a familiar product.</p>	<p>Apply their understanding to strengthen, or stiffen their structures.</p>	<p>Use materials and techniques to make their design stronger, stiffer or more stable, with support.</p>	<p>Explore and use contrasting design materials in their products.</p>

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				make their design.	material to make their design.	materials to make their design.						
Cycle 3 Spring  <b>On the Farm</b>	<b>Materials: Paper and card.</b> Develop an appealing design based on design criteria. Communicate their ideas through discussion.	<b>Materials: Paper and card.</b> Develop a design based on design criteria. Begin to develop their ideas for a design with support.	<b>Materials: Paper and card.</b> Contribute to a simple design. Make choices about their design when given options.	<b>Skills: Cutting, shaping and joining.</b> Select from a range of tools to perform practical tasks. Select from a range of materials to make their design.	<b>Skills: Cutting, shaping and joining.</b> Select the most appropriate tool from a choice of tools to perform practical tasks. Select the most appropriate material to make their design.	<b>Skills: Cutting, shaping and joining.</b> Use an increasing range of appropriate tools to complete their design. Use an increasing range of materials to make their design.	Explain the function of a range of existing products.	Select the most appropriate products for a range of given tasks.	Demonstrate the function of a range of familiar products.	Apply their understanding to strengthen, or stiffen more complex structures.	Use materials and techniques to make their design stronger, stiffer or more stable, with more independence.	Help to strengthen, or stiffen their designs with adult support.
Cycle 3 Summer  <b>All About the Body</b>	<b>Materials: Paper, card and wood.</b> Develop a functional design for a particular individual, based on design criteria. Develop their ideas through discussion.	<b>Materials: Paper, card and wood.</b> Develop a design based on design criteria. Develop their ideas for a design with support.	<b>Materials: Paper, card and wood.</b> Contribute to a simple design for a particular individual. Make choices about their design when given options.	<b>Skills: Cutting, shaping and joining.</b> Select from a range of tools to perform practical tasks. Select from a range of materials to make their design.	<b>Skills: Cutting, shaping and joining.</b> Select the most appropriate tool from a choice of tools to perform practical tasks. Select the most appropriate material to make their design.	<b>Skills: Cutting, shaping and joining.</b> Use an increasing range of appropriate tools to complete their design. Use an increasing range of materials to make their design.	Explain how a product carries out its function.	Explain the function of a familiar products.	Demonstrate the function of an increasing range of familiar products.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Use materials to strengthen, stiffen or reinforce structures with increasing independence.	Help to strengthen, stiffen or reinforce their designs with adult support.
Cycle 4 Autumn  <b>The Great Outdoors</b>	<b>Materials: Textiles and paper.</b> Develop an appealing design for a particular group, based on design criteria. Create simple sketches of their design.	<b>Materials: Textiles and paper.</b> Develop a design for a particular group, based on design criteria. Communicate their design ideas through drawing a simple design.	<b>Materials: Textiles and paper.</b> Contribute to a simple design for a particular group. Make choices about their design when given an increasing range of options.	<b>Skills: Joining. Finishing with colours.</b> Select from a range of equipment to perform practical tasks. Select from a range of components to make their design.	<b>Skills: Joining. Finishing with colours.</b> Select from given equipment to perform practical tasks. Select from given components to make their design.	<b>Skills: Joining. Finishing with colours.</b> Use an increasing range of appropriate tools to complete their design. Use an increasing range of materials to make their design.	Explain how a range of products carries out its function	Explain the function of a range of familiar products.	Explore the function of an unfamiliar product.	Develop an understanding of a simple mechanical system. <b>Explore how gears work and can be used.</b>	Use simple mechanisms to make things move. <b>Use products and toys with gears to explore how they work.</b>	Explore a product with moving parts.  <b>Explore games, toys and products which use gears to make things move.</b>

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<p>Cycle 4 Spring</p> <p><b>Marvellous Machines</b></p>	<p><b>Materials: Paper, card and wood.</b> Be supported to develop design criteria to help create a design for a particular individual. Create simple sketches of their design with some simple annotations.</p>	<p><b>Materials: Paper, card and wood.</b> Create a design for a particular individual, showing some awareness of making their designs suitable. Communicate their design ideas through drawing their designs.</p>	<p><b>Materials: Paper, card and wood.</b> Contribute to a simple design for a particular person. Make a choices about their design when given an increasing range of options.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Select from a range of equipment to perform practical tasks. Select from a range of components to make their design.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Select from given equipment to perform practical tasks. Select from given components to make their design.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Use an increasing range of appropriate tools to complete their design. Use an increasing range of materials to make their design.</p>	<p>Give an opinion about their final product with reference to the design criteria.</p>	<p>Give an opinion about their final product.</p>	<p>Explore the function of their finished product.</p>	<p>Incorporate mechanical systems in their designs. <b>Explore using leavers and linkages in their designs.</b></p>	<p>Use a range of mechanisms to make things move. <b>Use products and toys with levers and linkages to explore how they work.</b></p>	<p>Explore a range of products with moving parts.  <b>Explore games, toys and products which use leavers and linkages to make things move.</b></p>
<p>Cycle 4 Summer</p> <p><b>Road Dahl</b></p>	<p><b>Materials: Card, paper and wood.</b> Be supported to develop design criteria to help create a design for a particular group. Create sketches of their design with simple annotations about chosen materials.</p>	<p><b>Materials: Card, paper and wood.</b> Create a design for a particular group, showing some awareness of making their designs suitable. Communicate their design ideas through drawing their designs.</p>	<p><b>Materials: Card, paper and wood.</b> Contribute to a simple design for a particular group. Make a choices about their design when given an increasing range of options.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Select from a range of equipment to perform practical tasks. Select from a range of components to make their design.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Select from given equipment to perform practical tasks. Select from given components to make their design.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Use an increasing range of appropriate tools to complete their design. Use an increasing range of materials to make their design.</p>	<p>Give some opinions about their final product with reference to the design criteria.</p>	<p>Give some opinions about their final product.</p>	<p>Demonstrate the function of their finished product.</p>	<p>Explore how pulleys can be used in products. Plan to use a mechanism in their design. <b>Pulleys (Can also incorporate gears or levers and linkages in their design).</b></p>	<p>Use a mechanism in their final product.  <b>Pulleys.</b></p>	<p>Explore a range of products that use pulleys to make things move.  <b>Explore toys and products with pulleys.</b></p>
<p>Cycle 5 Autumn</p> <p><b>Come Dine with Me</b></p>	<p><b>Materials: Textiles and paper.</b> Develop design criteria to help create a design for a particular group. Create sketches of their design with simple annotations about chosen materials.</p>	<p><b>Materials: Textiles and paper.</b> Be supported to develop design criteria to help create a design for a particular group. Develop their ideas through discussion.</p>	<p><b>Materials: Textiles and paper.</b> Contribute to a simple design for a particular group. Make choices to improve the presentation of their design.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Select from a wide range of tools to perform practical tasks. Select from a wide range of materials to make their design.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Select tools to perform practical tasks. Select materials to make their design.</p>	<p><b>Skills: Cutting, shaping and joining.</b> Use tools to perform simple practical tasks. Use materials to make simple designs.</p>	<p>Make simple judgements about their products and designs against the design criteria.</p>	<p>Give an opinions about their final product based on the design criteria.</p>	<p>Share an opinion about their final product.</p>	<p>Develop an understanding of a simple electrical systems.  <b>Explore how electrical systems can be used in products.</b></p>	<p>Use a simple electrical systems to make things light up, move or make sounds. <b>Use products and toys with electrical systems to explore how they work.</b></p>	<p>Explore a product which creates light.  <b>Explore a game, toy or product which use electrical systems to make things light up.</b></p>

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Cycle 5 Spring  <b>Beautiful Britain</b>	<b>Materials: Card, paper and wood.</b> Develop design criteria to help create a design for a particular individual. Create simple sketches of their design with some simple annotations.	<b>Materials: Card, paper and wood</b> Be supported to develop design criteria to help create a design for a particular group. Develop their ideas through discussion.	<b>Materials: Card, paper and wood paper.</b> Contribute to a simple design for a particular group. Make choices to improve the presentation of their design.	<b>Skills: Joining. Finishing with colours.</b> Select from a wide range of tools to perform practical tasks. Select from a wide range of materials to make their design.	<b>Skills: Joining. Finishing with colours.</b> Select tools to perform practical tasks. Select materials to make their design.	<b>Skills: Joining. Finishing with colours.</b> Use tools to perform simple practical tasks. Use materials to make simple designs	Consider the views of others to improve their work.	Follow advice to improve their work.	Work with an alongside an adult to improve their work.	Incorporate electrical systems in their designs.  <b>Explore using electrical systems in their designs.</b>	Use a range of simple electrical systems to make things light up, move or make sounds. <b>Use a range of products and toys with electrical systems to explore how they work.</b>	Explore products that make sounds.  <b>Explore games, toys and products which use electrical systems to make sounds.</b>
Cycle 5 Summer  <b>Fighting Fit</b>	<b>Materials: Card, paper and wood.</b> Begin to use research to develop design criteria to create a design for a particular individual. Create sketches of their design with simple annotations about key design features.	<b>Materials: Card, paper and wood.</b> Begin to find out about existing products to help develop their designs for a product for a particular group. Create simple stretches of their design.	<b>Materials: Card, paper and wood.</b> Explore existing products. Make contributions to a designs for a product for a particular group.	<b>Skills: Joining. Finishing with colours.</b> Select from a wide range of tools to perform practical tasks. Select from a wide range of materials to make their design.	<b>Skills: Joining. Finishing with colours.</b> Select from a wider range of tools to perform practical tasks. Select from a wider range of materials to make their design.	<b>Skills: Joining. Finishing with colours.</b> Select from a wide range of tools to perform practical tasks. Select from a wide range of materials to make their design.	Understand how an important invention has helped our lives.	Identify important inventions we use in our lives.	Explore the different types of technology we use in our everyday lives.	Explore how electrical systems can be used in products. Plan to use an electrical system in their design. <b>Electrical systems (Lights, buzzers, switches).</b>	Use an electrical system in their final product.  <b>Electrical systems (Lights, buzzers, switches).</b>	Explore a range of products that use electrical systems.  <b>Explore toys and products that use electrical systems.</b>
Cycle 6 Autumn  <b>Explorers</b>	<b>Materials: Card, paper and wood.</b> Begin to use research to develop design criteria to create a design for a particular group. Create stretches, cross sectional diagrams or prototypes of their design.	<b>Materials: Card, paper and wood.</b> Begin to find out about existing products to help develop their designs for a product for a particular group. Create simple stretches of their design.	<b>Materials: Card, paper and wood.</b> Explore existing products. Make contributions to a designs for a product for a particular group.	<b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wide range of equipment to perform practical tasks. Select from a wide range of components to make their design.	<b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wider range of tools to perform practical tasks. Select from a wider range of materials to make their design.	<b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wide range of tools to perform practical tasks. Select from a wide range of materials to make their design.	Understand how an inventor or designer has helped our lives.	Identify the inventions or designs of an important inventor / designer.	Explore important inventions we use in our lives.	Develop an understanding of how computing systems can control products. <b>Explore how computing systems can be used in products.</b>	Use a simple computing systems to control products or objects. <b>Explore how computing systems can be used to control products.</b>	Explore a product which can be programmed.  <b>Explore a game, toy or product which use can be programmed.</b>

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<p>Cycle 6 Spring</p> <p><b>Chocolate</b></p>	<p><b>Materials: Card, paper and wood.</b> Use research to develop design criteria to create a design for a particular individual. Create sketches of their design with simple annotations about key design features.</p>	<p><b>Materials: Card, paper and wood.</b> Begin to find out about existing products to help develop their designs for a product for a particular group. Create simple stretches of their design.</p>	<p><b>Materials: Card, paper and wood.</b> Explore existing products. Make contributions to a designs for a product for a particular group.</p>	<p><b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wide range of equipment to perform practical tasks. Select from a wide range of components to make their design.</p>	<p><b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wider range of tools to perform practical tasks. Select from a wider range of materials to make their design.</p>	<p><b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wide range of tools to perform practical tasks. Select from a wide range of materials to make their design.</p>	Understand how key inventions has helped shape our world.	Identify how key invention has helped shape our world.	Explore important inventions that help our lives.	Incorporate computing systems in their designs.  <b>Explore using computing systems in their designs.</b>	Use a range of simple computing systems to control products or objects. <b>Use a range of products and toys with computing systems that can control objects.</b>	Explore a product that uses a computing system.  <b>Explore a game, toy or product that can be controlled.</b>
<p>Cycle 6 Summer</p> <p><b>My Body</b></p>	<p><b>Materials: Card, paper and wood.</b> Use research to develop design criteria to create a design for a particular group. Create stretches, cross sectional diagrams or prototypes of their design.</p>	<p><b>Materials: Card, paper and wood.</b> Carry out simple research to develop help create a design for a particular group. Create simple stretches with labels.</p>	<p><b>Materials: Card, paper and wood.</b> Explore existing products. Make contributions to a designs for a product for a particular group.</p>	<p><b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wide range of equipment to perform practical tasks. Select from a wide range of components to make their design.</p>	<p><b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wider range of tools to perform practical tasks. Select from a wider range of materials to make their design.</p>	<p><b>Skills: Joining and shaping. Finishing with colours.</b> Select from a wide range of tools to perform practical tasks. Select from a wide range of materials to make their design.</p>	Understand how a key designer or inventor has helped shape our world.	Identify how a key inventor or designer has helped shape our world.	Explore how an important inventor or designer has helped our lives.	Explore how computer systems can be used in products. Plan to use a computer system in their design. <b>Computing systems (Program, monitor or control their product).</b>	Use a computing system in their final product.  <b>Computing systems (Program, monitor or control their product).</b>	Explore a range of products that use computing systems.  <b>Explore a range of games, toys or products that can be controlled.</b>
<p>Cycle 7 Autumn</p>	<p>Carry out simple research to identify user needs. Use research to help develop products for specific users.</p>	<p>Use simple research or information to identify a user need. Begin to design products for specific users.</p>	<p>Explore existing designs to help to make simple design choices. Make contributions to improve the design of a product.</p>	<p>Select and use specialist tools and equipment with increased precision. Select from and use a wider range of materials.</p>	<p>Use some specialist tools and equipment with increased accuracy. Use a wider range of materials and components in products.</p>	<p>Use some specialist tools with support to create designs. Use a range of materials and components in products.</p>	Research the designs and inventions of an influential designer / inventor.	Explore images of the designs and inventions of an influential designer / inventor.	Explore the products and inventions of an influential designer / inventor.	Begin to select materials based on their properties to enable their products to be functional.	Begin describe some properties of materials used in their products.	Explore the properties of materials used in their products.
<p>Cycle 7 Spring</p>	<p>Carry out simple research to identify and understand user needs. Use research to help develop products for specific users.</p>	<p>Use simple research or information to understand a user need. Begin to design products for specific users.</p>	<p>Explore existing designs to help to make simple design choices. Make contributions to improve the design of a product.</p>	<p>Select and use specialist tools and equipment with increased precision. Select from and use a wider range of materials.</p>	<p>Use some specialist tools and equipment with increased accuracy. Use a wider range of materials and components in products.</p>	<p>Use some specialist tools with support to create designs. Use a range of materials and components in products.</p>	Investigate new technologies and inventions that will influence our lives.	Explore information about new technologies and inventions that will influence our lives.	Explore images of new technologies and inventions that will influence our lives.	Begin to select materials based on their properties to enable their products to be functional.	Begin describe some properties of materials used in their products.	Explore the properties of materials used in their products.

## DT Knowledge overview

Cycle 7 Summer	Carry out simple research to identify and understand user needs. Use research to help develop products to solve problems for specific users.	Use simple research or information to understand a user need. Begin to design products to solve a problem for a specific users.	Explore existing designs to help to make simple design choices.  Make simple contributions to improve the design of a product.	Select and use specialist tools and equipment and machinery with increased precision. Select from and use a wider, range of materials.	Use some specialist tools and equipment and machinery with increased accuracy. Use a wider range of materials and components in products.	Use some specialist tools with support to create designs.  Use a range of materials and components in products.	Make simple evaluations about their products against the design specification.	Make simple judgements about their product / design.	Work alongside an adult to suggest ways to improve their work.	Begin to select materials based on their properties to enable their products to be functional.	Begin describe some properties of materials used in their products.	Explore the properties of materials used in their products.
Cycle 8 Autumn	Identify their own design problems. Create designs and ideas to solve their design problem.	Select a design problem to try to overcome. Contribute to designs to solve simple design problems.	Make simple contributions to the design of a product. Help create a product to solve a simple problem.	Use an increasing range of specialist techniques and processes with increasing precision. Select from a wider range of more complex components.	Use specialist tools and equipment and machinery with increased accuracy. Use a wider range of materials and components in products.	Use some specialist tools and equipment with support to create designs. Use a wider range of materials and components in products.	Analyse the work of present designers or inventors.	Explore information about new technologies and inventions that will influence the world.	Explore images of new technologies and inventions that will influence the world.	Select materials based on their properties to enable their products to be functional.	Describe some properties of materials used in their products.	Explore the properties of an increasing range of materials.
Cycle 8 Spring	Develop functional, appealing designs and products that respond to needs of individuals.	Contribute to designs that are designed to meet the needs of a specific individual.	Make simple contributions to the design of a product. Help create a product to meet the needs of a specific individual.	Use specialist techniques and processes with increasing precision. Select from a wider range of more complex components.	Use specialist tools and equipment and machinery with increased accuracy. Use a wider range of materials and components in products.	Use some specialist tools and equipment with support to create designs. Use a wider range of materials and components in products.	Make a range of evaluations about their products against the design specification.	Make judgements about their final product / design.	Work alongside an adult to suggest ways to improve their design.	Select more complex materials based on their properties to enable their products to be functional.	Describe some properties of an increasing range of materials used in their products.	Explore and begin to describe the properties of an increasing range of materials.
Cycle 8 Summer	Develop functional, appealing products that respond to needs of specific groups.	Contribute to designs that are designed to meet the needs of a specific group.	Make simple contributions to the design of a product. Help create a product to meet the needs of a specific group.	Use specialist techniques and processes with increasing precision. Select from a wider range of more complex components.	Use specialist tools and equipment and machinery with increased accuracy. Use a wider range of materials and components in products.	Use some specialist tools and equipment with support to create designs. Use a wider range of materials and components in products.	Make and test evaluations about their products against the design specification.	Make judgements about their product / design.	Work alongside an adult to suggest ways to improve their designs.	Understand how to use more advanced mechanical systems in their products.	Explore how more advanced mechanical can be used in products.	Explore and use products and toys with more advanced mechanical systems.
Cycle 9 Autumn	Develop and communicate design ideas. Begin to use annotated sketches and detailed plans.	Begin to develop and communicate simple design ideas. Begin to make simple annotations to diagrams and sketches.	Begin to develop simple design ideas with support. Contribute to simple to sketches to help plan their design.	Select and use specialist tools, techniques, processes, equipment and machinery with increasing precision. Select from a wider range of more complex	Use specialist tools, equipment, machinery and techniques with increased accuracy. Use an increasingly wider range of materials and	Use specialist tools and equipment with support to create designs. Use an increasing wider range of materials and components in products.	Understand developments in design and technology over the last 200 years and the impact this has had on the world.	Explore the developments in design and technology in a specific area over the last 200 years and the impact this has had on the world.	Explore how technologies have changed over time.	Understand and evaluate the properties of materials to achieve functional solutions.	Describe the key properties of an increasing range of materials used in their products.	Explore describe simple properties of an range of materials.

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				materials, components, taking into account their properties.	components in products.							
Cycle 9 Spring	Develop and communicate design ideas. Communicate design plans with oral and digital presentations.	Begin to develop and communicate design ideas. Begin to make annotations to diagrams and sketches.	Begin to develop simple design ideas with support. Contribute to simple to sketches to help plan their design.	Select and use specialist tools, techniques, processes, equipment and machinery with increasing precision. Select from a wider range of more complex materials, components, taking into account their properties.	Use specialist tools, equipment, machinery and techniques with increased accuracy. Use an increasingly wider range of materials and components in products.	Use specialist tools and equipment with support to create designs. Use an increasing wider range of materials and components in products.	Test, evaluate and refine their ideas and products.	Suggest ways to improve their ideas and final products.	Suggest ways to improve their ideas and products in collaboration with an adult.	Understand how to use more advanced mechanical systems in their products.	Explore how more advanced mechanical can be used in products.	Explore and use products and toys with more advanced mechanical systems.
Cycle 9 Summer	Develop and communicate design ideas using computer based tools.	Begin to develop and communicate design ideas. Use ICT to help design or communicate their design.	Begin to develop simple design ideas with support. Use ICT to communicate their design.	Select and use specialist tools, techniques, processes, equipment and machinery with increasing precision. Select from a wider range of more complex materials, components, taking into account their properties.	Use specialist tools, equipment, machinery and techniques with increased accuracy. Use an increasingly wider range of materials and components in products.	Use specialist tools and equipment with support to create designs. Use an increasing wider range of materials and components in products.	Test, evaluate and refine their ideas and products, taking into account the views of users and other interested groups.	Improve their ideas and products by taking into account the views of others.	Suggest ways to improve their ideas and final products.	Understand how to use more advanced electrical and electronic systems in their products.	Explore how more advanced electric and electronic systems can be used in products.	Explore and use products and toys with more advanced electric and electronic systems.