

The Laurels Primary School - DT Coverage Map 2021/22

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year R						
Year 1		Food: Fruit and vegetables Learn to distinguish between fruit and vegetables and where they grow. Design a fruit and vegetable smoothie and accompanying packaging.	Mechanisms: making a moving story book Explore slider mechanisms and the movement they output, to design, make and evaluate a moving storybook from a range of templates.	Structures: Constructing a windmill Inspired by the song, 'Mouse in a windmill', design and construct a windmill for a client (mouse) to live in. Explore various types of windmill, how they work and their key features.	Textiles: Puppets Explore methods of joining fabric. Design and make a character-based hand puppet using a preferred joining technique, before decorating.	Mechanisms: Wheels and axles Learn about the key parts of a wheeled vehicle, to develop an understanding of how wheels, axles and axle holders work. Design and make a moving vehicle.
Year 2		Food: A balanced diet Learn about the food groups (carbohydrates, proteins, fruits and vegetables, dairy, oils and spreads) to understand a balanced diet to develop a healthy wrap.	Mechanisms: Fairground wheel Design and create a functional Ferris wheel, learn how different components fit together so that the wheel rotates and the structure stands freely.	Structures: Baby Bear's chair Explore stability and methods to strengthen structures, to understand Baby Bear's chair weaknesses and develop an improved solution for him to use.	Textiles: Pouches Learn how to sew a running stitch ready to design, make and decorate a pouch using a template.	Mechanisms: Making a moving monster Explore levers, linkages and pivots through existing products and experimentation, use this research to construct and assemble a moving monster.
Year 3		Textiles: Cushions Learn and apply two new sewing techniques – cross-stitch and appliqué. Utilise these new skills to design and make a cushion.	Electrical Systems: Static electricity Explore the science behind static electricity and apply this new knowledge to generate ideas for and make a static-electricity game.	Mechanical systems: Pneumatic toys Explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams.	Food: eating seasonally Learn about various fruits and vegetables, and when, where and why they are grown in different seasons. Discover the relationship between colour and health benefits.	Structures: Constructing a castle Identify and learn about the key features of a castle, before designing and making a recycled-material castle (structure).
Year 4		Electrical systems: Torches Identify the difference between electrical and electronic products. Evaluate a range of existing torches and their features, then develop a new functional torch design.	Mechanical systems: Making a slingshot car Using a range of materials, design and make a car with a working slingshot mechanism and house the mechanism using a range of nets.	Food: adapting a recipe Work in groups to adapt an existing biscuit recipe, whilst taking into account the cost of the ingredients and other expenses against a set budget.	Structure: pavilions Investigate and model frame structures to improve their stability, then apply this research to design and create a stable, decorated pavilion.	Textiles: Fastenings Analyse and evaluate a range of existing fastenings, then devise a list of design criteria to design, generate templates and make a fabric book sleeve.
Year 5		Mechanical systems: Pop-up book Create a functional four-page pop-up storybook design, using lever, sliders, layers and spacers to create paper-based mechanisms.	Food: What could be healthier? Discover the farm to fork process, understand the key welfare issues for rearing cattle. Compare the nutritional value of existing sauces and develop a healthier recipe.	Structure: Bridges Test and analyse various types of bridge to determine their strength and stability. Explore material properties and sources, before marking, sawing and assembling a wooden truss bridge.	Textiles: Stuffed toys Design a stuffed toy and make decisions on materials, decorations and attachments (appendages), after learning how to sew a blanket stitch.	Electrical systems: Electronic greetings cards Learn about the development of exchanging personal messages, to the invention of the Penny Black stamp. Develop an electronic greeting card, using paper-applicable circuit components.
Year 6	Food: Come dine with me Develop a three-course menu focused on three key ingredients, as part of a paired challenge to develop the best class recipes. Explore each key ingredient's farm to fork process.	Electrical systems: Steady hand game Understand what is meant by fit for purpose design and form follows function. Design and develop a steady hand game using a series circuit, including housing and backboard.	Mechanical systems: Automata toys Develop a functional automata window display, to meet the requirements in a design brief. Explore and create cam, follower and axle mechanisms to mimic different movements.	Textiles: Waistcoats Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, design, assemble and decorate a waistcoat for a chosen purpose.	Structure: Playgrounds Research existing playground equipment and their different forms, before designing and developing a range of apparatus to meet a list of specified design criteria.	Digital world: Navigating the world Design and program a navigation tool to produce a multifunctional device for trekkers using CAD 3D modelling software. Pitch and explain the product to a guest panel.
Whole school	Light lanterns					

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year R						
Year 1	Food: Fruit and vegetables Learn to distinguish between fruit and vegetables and where they grow. Design a fruit and vegetable smoothie and accompanying packaging.		Mechanisms: making a moving story book Explore slider mechanisms and the movement they output, to design, make and evaluate a moving storybook from a range of templates.	Structures: Constructing a windmill Inspired by the song, 'Mouse in a windmill', design and construct a windmill for a client (mouse) to live in. Explore various types of windmill, how they work and their key features.	Textiles: Puppets Explore methods of joining fabric. Design and make a character-based hand puppet using a preferred joining technique, before decorating.	Mechanisms: Wheels and axles Learn about the key parts of a wheeled vehicle, to develop an understanding of how wheels, axles and axle holders work. Design and make a moving vehicle.
Year 2	Food: A balanced diet Learn about the food groups (carbohydrates, proteins, fruits and vegetables, dairy, oils and spreads) to understand a balanced diet to develop a healthy wrap.		Mechanisms: Fairground wheel Design and create a functional Ferris wheel, learn how different components fit together so that the wheel rotates and the structure stands freely.	Structures: Baby Bear's chair Explore stability and methods to strengthen structures, to understand Baby Bear's chair weaknesses and develop an improved solution for him to use.	Textiles: Pouches Learn how to sew a running stitch ready to design, make and decorate a pouch using a template.	Mechanisms: Making a moving monster Explore levers, linkages and pivots through existing products and experimentation, use this research to construct and assemble a moving monster.
Year 3	Textiles: Cushions Learn and apply two new sewing techniques – cross-stitch and appliqué. Utilise these new skills to design and make a cushion.	Electrical systems: Static electricity Explore the science behind static electricity and apply this new knowledge to generate ideas for and make a static-electricity game.	Mechanical systems: Pneumatic toys Explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams.	Food: eating seasonally Learn about various fruits and vegetables, and when, where and why they are grown in different seasons. Discover the relationship between colour and health benefits.	Digital world: Electronic charm Design, develop a program, house and promote a Micro:bit electronic charm to use in low-light conditions.	Structures: Constructing a castle Identify and learn about the key features of a castle, before designing and making a recycled-material castle (structure).
Year 4	Electrical systems: Torches Identify the difference between electrical and electronic products. Evaluate a range of existing torches and their features, then develop a new functional torch design.	Mechanical systems: Making a slingshot car Using a range of materials, design and make a car with a working slingshot mechanism and house the mechanism using a range of nets.	Food: adapting a recipe Work in groups to adapt an existing biscuit recipe, whilst taking into account the cost of the ingredients and other expenses against a set budget.	Digital world: Mindful moments timer Explore what is meant by mindfulness and write design criteria to fulfil a brief to develop a programmed product for timing a mindful moment.	Structure: pavilions Investigate and model frame structures to improve their stability, then apply this research to design and create a stable, decorated pavilion.	Textiles: Fastenings Analyse and evaluate a range of existing fastenings, then devise a list of design criteria to design, generate templates and make a fabric book sleeve.
Year 5	Mechanical systems: Pop-up book Create a functional four-page pop-up storybook design, using lever, sliders, layers and spacers to create paper-based mechanisms.	Food: What could be healthier? Discover the farm to fork process, understand the key welfare issues for rearing cattle. Compare the nutritional value of existing sauces and develop a healthier recipe.	Digital world: Monitoring devices Apply Computing knowledge and understanding to program a Micro: bit animal monitoring device. Develop 3D CAD skills by learning how to navigate the Tinkercad interface and essential tools to combine multiple objects.	Structure: Bridges Test and analyse various types of bridge to determine their strength and stability. Explore material properties and sources, before marking, sawing and assembling a wooden truss bridge.	Textiles: Stuffed toys Design a stuffed toy and make decisions on materials, decorations and attachments (appendages), after learning how to sew a blanket stitch.	Electrical systems: Electronic greetings cards Learn about the development of exchanging personal messages, to the invention of the Penny Black stamp. Develop an electronic greeting card, using paper-applicable circuit components.
Year 6	Food: Come dine with me Develop a three-course menu focused on three key ingredients, as part of a paired challenge to develop the best class recipes. Explore each key ingredient's farm to fork process.	Digital world: Navigating the world Design and program a navigation tool to produce a multifunctional device for trekkers using CAD 3D modelling software. Pitch and explain the product to a guest panel.	Structure: Playgrounds Research existing playground equipment and their different forms, before designing and developing a range of apparatus to meet a list of specified design criteria.	Textiles: Waistcoats Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, design, assemble and decorate a waistcoat for a chosen purpose.	Electrical systems: Steady hand game Understand what is meant by fit for purpose design and form follows function. Design and develop a steady hand game using a series circuit, including housing and backboard.	Mechanical systems: Automata toys Develop a functional automata window display, to meet the requirements in a design brief. Explore and create cam, follower and axle mechanisms to mimic different movements.
Whole school						

The Laurels Primary School - DT Coverage Map (Alternative)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year R						
Year 1	Food: Fruit and vegetables Learn to distinguish between fruit and vegetables and where they grow. Design a fruit and vegetable smoothie and accompanying packaging.		Mechanisms: making a moving story book Explore slider mechanisms and the movement they output, to design, make and evaluate a moving storybook from a range of templates.	Structures: Constructing a windmill Inspired by the song, 'Mouse in a windmill', design and construct a windmill for a client (mouse) to live in. Explore various types of windmill, how they work and their key features.	Textiles: Puppets Explore methods of joining fabric. Design and make a character-based hand puppet using a preferred joining technique, before decorating.	Mechanisms: Wheels and axles Learn about the key parts of a wheeled vehicle, to develop an understanding of how wheels, axles and axle holders work. Design and make a moving vehicle.
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