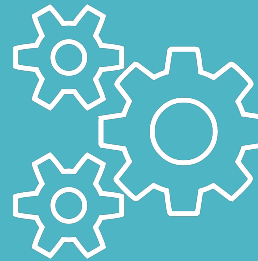


*Design and technology*

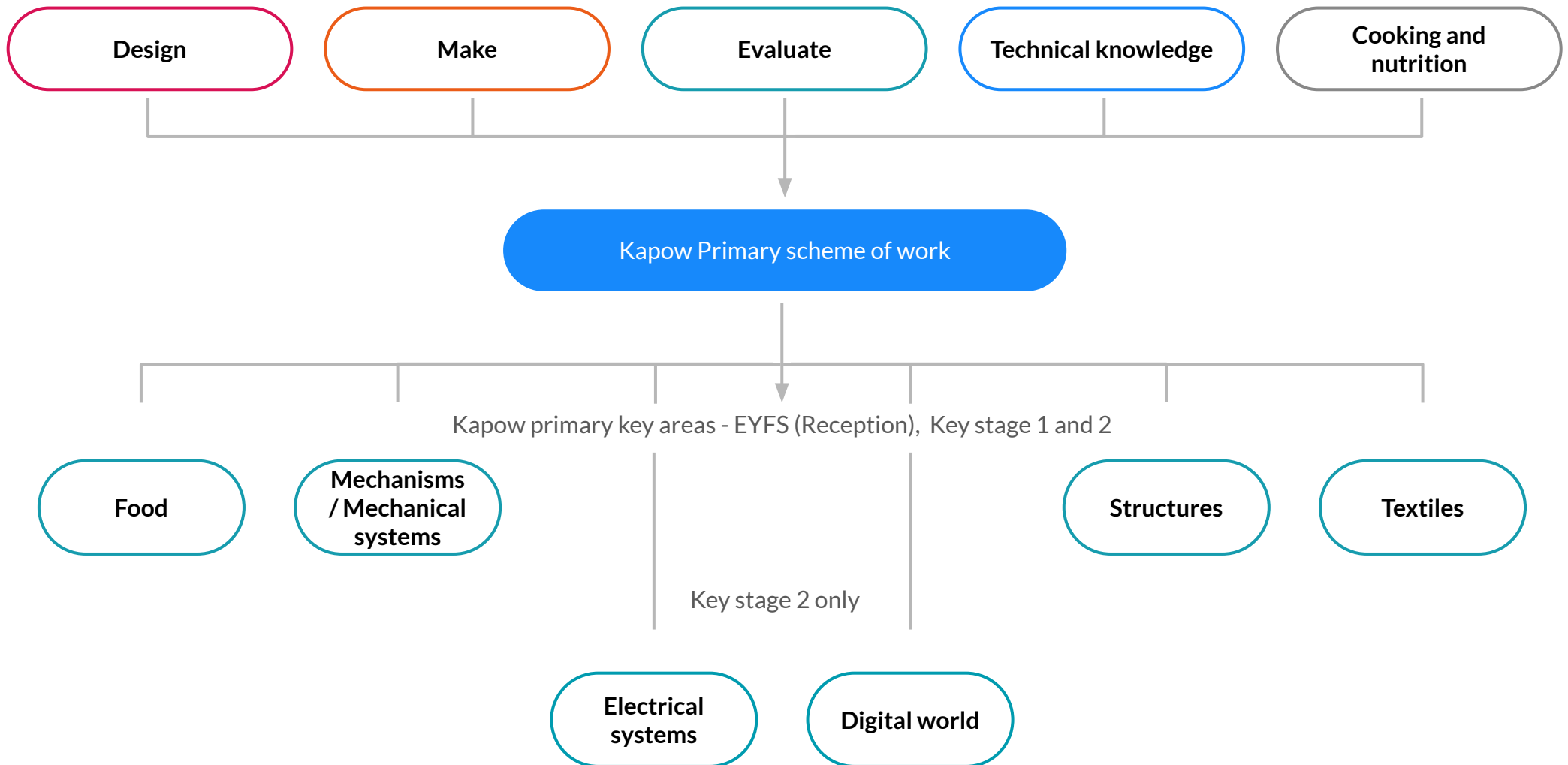


*Kapow  
Primary™*

National curriculum  
mapping

# Introduction

Kapow Primary offers full coverage of the KS1 and KS2 Design and technology curriculum and we have categorised our content into six areas, with five strands that run throughout:



# Overview

|  | Food | Mechanisms | Structures | Textiles | Electrical systems | Digital world |
|--|------|------------|------------|----------|--------------------|---------------|
|--|------|------------|------------|----------|--------------------|---------------|

Aside from Electrical systems and Digital world, which are taught in KS2 only, each of these acts as the focus for a unit within each year group

|                            |                                  |                                      |                         |                              |                   |                          |
|----------------------------|----------------------------------|--------------------------------------|-------------------------|------------------------------|-------------------|--------------------------|
| <b>EYFS</b><br>(Reception) | Soup                             |                                      | Boats<br>Junk modelling | Bookmarks                    |                   |                          |
| <b>Year 1</b>              | Fruit and vegetables<br>Smoothie | Moving storybook<br>Wheels and axles | Windmills               | Puppets                      |                   |                          |
| <b>Year 2</b>              | A balanced diet                  | Moving monsters<br>Ferris wheels     | Baby bear's chair       | Pouches                      |                   |                          |
| <b>Year 3</b>              | Eating seasonally                | Pneumatic toys                       | Castles                 | Cross stitch and<br>appliqué | Electric poster   | Electronic charm         |
| <b>Year 4</b>              | Adapting a recipe                | Slingshot cars                       | Pavilions               | Fastenings                   | Torches           | Mindful moments<br>timer |
| <b>Year 5</b>              | What could be<br>healthier?      | Pop-up books                         | Bridges                 | Stuffed toys                 | Doodlers          | Monitoring devices       |
| <b>Year 6</b>              | Come dine with me                | Automata toys                        | Playgrounds             | Waistcoats                   | Steady hand games | Navigating the world     |

The four strands (below) of the Design and technology curriculum run through each unit; with Cooking and nutrition as the focus of one Food unit per year



# Early years outcomes in Kapow Primary's units

| Early Years Foundation Stage (Reception)<br><br>Kapow Primary's units | Early years outcomes: Prime Areas<br><br>Development Matters 2021 statements<br>Early Learning Goals   | Early years outcomes: Specific Areas<br><br>Development Matters 2021 statements<br>Early Learning Goals  | Characteristics of effective learning  |
|---|--|--|--|
| <a href="#">Structures: Junk modelling</a>                            | <b>Physical development</b><br><br>-Develop small motor skills so that they can use a range of tools competently, safely and confidently.<br>-ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery.   | <b>Expressive Arts and Design</b><br><br>-Explore, use and refine a variety of artistic effects to express ideas and feelings.<br>-Return to and build on their previous learning, refining ideas and developing their ability to represent them.<br>-Create collaboratively, sharing ideas, resources and skills.<br>-ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.<br>-ELG: Creating with materials> Share their creations, explaining the process they have used. | ✓ Playing and exploring<br>✓ Active learning<br>✓ Creating and thinking critically |
| <a href="#">Food: Soup</a>  | <b>Communication and language</b><br><br>-Learn new vocabulary.<br>-Use new vocabulary throughout the day.<br>-ELG: Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.<br><br><b>Personal, social and emotional development</b><br><br>-Know and talk about the different factors that support their overall health and wellbeing: healthy eating.<br>-ELG: Managing self> Manage their own basic hygiene and personal needs, including... understanding the importance of healthy food choices.<br><br><b>Physical development</b><br><br>-Develop small motor skills so that they can use a range of tools competently, safely and confidently.<br>-ELG: Use a range of small tools, including scissors, paint brushes and cutlery. | <b>Understanding the world</b><br><br>-Explore the natural world around them.<br>-ELG: The Natural World>Explore the natural world around them, making observations and drawing pictures of animals and plants.<br><br><b>Expressive Arts and Design</b><br><br>-Explore, use and refine a variety of artistic effects to express ideas and feelings.<br>-ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.  | ✓ Playing and exploring<br>✓ Active learning                                       |

# Early years outcomes in Kapow Primary's units

| Early Years Foundation Stage (Reception)<br><br>Kapow Primary's units | Early years outcomes: Prime Areas<br><br>Development Matters 2021 statements<br>Early Learning Goals   | Early years outcomes: Specific Areas<br><br>Development Matters 2021 statements<br>Early Learning Goals   | Characteristics of effective learning  |
|---|--|---|--|
| <a href="#">Textiles: Bookmarks</a>                                   | <b>Physical development</b><br><br>-Develop small motor skills so that they can use a range of tools competently, safely and confidently.<br>-ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery.   | <b>Expressive Arts and Design</b><br><br>-Explore, use and refine a variety of artistic effects to express ideas and feelings.<br>-Return to and build on their previous learning, refining ideas and developing their ability to represent them.<br>-ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.<br>-ELG: Creating with materials> Share their creations, explaining the process they have used.   | ✓ Playing and exploring<br>✓ Active learning<br>✓ Creating and thinking critically |
| <a href="#">Structures: Boats</a>                                     | <b>Communication and language</b><br><br>-Articulate their ideas and thoughts in well-formed sentences.<br>-Connect one idea or action to another using a range of connectives.<br>-Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.<br><br>-ELG: Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.<br>-ELG: Speaking> Offer explanations for why things might happen. | <b>Understanding the world</b><br>-Explore the natural world around them.<br>-ELG: The Natural World>Explore the natural world around them, making observations and drawing pictures of animals and plants.<br><br><b>Expressive Arts and Design</b><br><br>-Explore, use and refine a variety of artistic effects to express ideas and feelings.<br>-ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.<br>-ELG: Creating with materials> Share their creations, explaining the process they have used. | ✓ Playing and exploring<br>✓ Active learning<br>✓ Creating and thinking critically |

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 1 - National curriculum Design and technology content  | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Key stage 1 - Year 1 |                             |                           |                                    |   |
|--|---|--|-----------------------------|---------------------------|------------------------------------|---|
|  |   | * <a href="#">Moving story books</a>         | * <a href="#">Windmills</a> | * <a href="#">Puppets</a> | * <a href="#">Wheels and axles</a> | * <a href="#">Fruit and vegetable smoothies</a> |
| Design purposeful, functional, appealing products for themselves and other users based on design criteria  | Design  | ✓  | ✓                           | ✓                         | ✓                                  |   |
| Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology | Design  | ✓  | ✓                           | ✓                         | ✓                                  |   |
| Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]                                 | Make  | ✓  | ✓                           | ✓                         | ✓                                  | ✓   |
| Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics         | Make  | ✓  | ✓                           | ✓                         | ✓                                  | ✓   |
| Explore and evaluate a range of existing products  | Evaluate                                      | ✓  | ✓                           |                           | ✓                                  | ✓   |
| Evaluate their ideas and products against design criteria  | Evaluate                                      | ✓  | ✓                           | ✓                         | ✓                                  |   |

\*Units that are included in the condensed curriculum

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 1 - National curriculum Design and technology content                                 | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Key stage 1 - Year 1 |                             |                           |                                    |   |
|---|---|--|-----------------------------|---------------------------|------------------------------------|---|
|   |   | * <a href="#">Moving story books</a>         | * <a href="#">Windmills</a> | * <a href="#">Puppets</a> | * <a href="#">Wheels and axles</a> | * <a href="#">Fruit and vegetable smoothies</a> |
| Build structures, exploring how they can be made stronger, stiffer and more stable              | Technical knowledge                           |  | ✓                           |                           |                                    |   |
| Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. | Technical knowledge                           | ✓  | ✓                           |                           | ✓                                  |   |
| Use basic principles of a healthy and varied diet to prepare dishes                             | Cooking and nutrition                         |  |                             |                           |                                    | ✓   |
| Understand where food comes from  | Cooking and nutrition                         |  |                             |                           |                                    | ✓   |

\*Units that are included in the condensed curriculum

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 1 - National curriculum Design and technology content  | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Key stage 1 - Year 2 |                                     |                           |                                 |                                   |
|--|---|--|-------------------------------------|---------------------------|---------------------------------|-----------------------------------|
|  |   | * <a href="#">Moving monsters</a>            | * <a href="#">Baby bear's chair</a> | * <a href="#">Pouches</a> | * <a href="#">Ferris wheels</a> | * <a href="#">A balanced diet</a> |
| Design purposeful, functional, appealing products for themselves and other users based on design criteria  | Design  | ✓  | ✓                                   | ✓                         | ✓                               |                                   |
| Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology | Design  | ✓  | ✓                                   | ✓                         | ✓                               |                                   |
| Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]                                 | Make  | ✓  | ✓                                   | ✓                         | ✓                               |                                   |
| Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics         | Make  | ✓  | ✓                                   | ✓                         | ✓                               | ✓                                 |
| Explore and evaluate a range of existing products  | Evaluate                                      | ✓  |                                     | ✓                         | ✓                               | ✓                                 |
| Evaluate their ideas and products against design criteria  | Evaluate                                      | ✓  | ✓                                   | ✓                         | ✓                               |                                   |

\*Units that are included in the condensed curriculum



# National Curriculum by Kapow Primary's themes and topics

| Key Stage 1 - National curriculum Design and technology content                                 | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Key stage 1 - Year 2 |                                     |                           |                                 |                                   |
|---|---|--|-------------------------------------|---------------------------|---------------------------------|-----------------------------------|
|   |   | * <a href="#">Moving monsters</a>            | * <a href="#">Baby bear's chair</a> | * <a href="#">Pouches</a> | * <a href="#">Ferris wheels</a> | * <a href="#">A balanced diet</a> |
| Build structures, exploring how they can be made stronger, stiffer and more stable              | Technical knowledge                           |  | ✓                                   |                           | ✓                               |                                   |
| Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. | Technical knowledge                           | ✓  |                                     |                           | ✓                               |                                   |
| Use basic principles of a healthy and varied diet to prepare dishes                             | Cooking and nutrition                         |  |                                     |                           |                                 | ✓                                 |
| Understand where food comes from  | Cooking and nutrition                         |  |                                     |                           |                                 | ✓                                 |

\*Units that are included in the condensed curriculum

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 2 - National curriculum Design and technology content   | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Lower key stage 2 - Year 3 |                          |  |                                 |                                 |                                   |
|---|---|--|--------------------------|--|---------------------------------|---------------------------------|-----------------------------------|
|   |   | <a href="#">*Eating seasonally</a>                 | <a href="#">*Castles</a> | <a href="#">*Cross stitch and appliqué</a> | <a href="#">*Pneumatic toys</a> | <a href="#">Electric poster</a> | <a href="#">*Electronic charm</a> |
| 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           | Design  | ✓  | ✓                        | ✓  | ✓                               | ✓                               | ✓                                 |
| Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design | Design  |  | ✓                        | ✓  | ✓                               | ✓                               | ✓                                 |
| Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately                                    | Make  |  | ✓                        | ✓  | ✓                               | ✓                               | ✓                                 |
| Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics                              | Make  | ✓  | ✓                        | ✓  | ✓                               | ✓                               | ✓                                 |
| Investigate and analyse a range of existing products  | Evaluate                                      |  | ✓                        |  | ✓                               |                                 |                                   |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work  | Evaluate                                      |  | ✓                        | ✓  | ✓                               | ✓                               | ✓                                 |

\*Units that are included in the condensed curriculum

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 2 - National curriculum Design and technology content  | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Lower key stage 2 - Year 3 |                          |  |                                 |                                 |                                   |
|--|---|--|--------------------------|--|---------------------------------|---------------------------------|-----------------------------------|
|  |   | <a href="#">*Eating seasonally</a>                 | <a href="#">*Castles</a> | <a href="#">*Cross stitch and appliqué</a> | <a href="#">*Pneumatic toys</a> | <a href="#">Electric poster</a> | <a href="#">*Electronic charm</a> |
| Understand how key events and individuals in design and technology have helped shape the world   | Evaluate                                      |  |                          |  | ✓                               |                                 | ✓                                 |
| Apply their understanding of how to strengthen, stiffen and reinforce more complex structures  | Technical knowledge                           |  | ✓                        |  |                                 |                                 |                                   |
| Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]                         | Technical knowledge                           |  |                          |  | ✓                               |                                 |                                   |
| Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] | Technical knowledge                           |  |                          |  |                                 | ✓                               |                                   |
| Apply their understanding of computing to program, monitor and control their products  | Technical knowledge                           |  |                          |  |                                 |                                 | ✓                                 |
| Understand and apply principles of a healthy and varied diet   | Cooking and nutrition                         | ✓  |                          |  |                                 |                                 |                                   |
| Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques   | Cooking and nutrition                         | ✓  |                          |  |                                 |                                 |                                   |
| Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed                          | Cooking and nutrition                         | ✓  |                          |  |                                 |                                 |                                   |
| *Units that are included in the condensed curriculum   |   |  |                          |  |                                 |                                 |                                   |

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 2 - National curriculum Design and technology content  | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Lower key stage 2 - Year 4 |                                     |                              |                                  |                           |                               |
|--|---|--|-------------------------------------|------------------------------|----------------------------------|---------------------------|-------------------------------|
|  |   | <a href="#">* Pavilions</a>                        | <a href="#">* Adapting a recipe</a> | <a href="#">* Fastenings</a> | <a href="#">* Slingshot cars</a> | <a href="#">* Torches</a> | <a href="#">Mindful timer</a> |
| 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          | Design  | ✓  | ✓                                   | ✓                            | ✓                                | ✓                         | ✓                             |
| Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design | Design  | ✓  |                                     | ✓                            | ✓                                | ✓                         |                               |
| Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately                                   | Make  | ✓  |                                     | ✓                            | ✓                                | ✓                         | ✓                             |
| Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics                             | Make  | ✓  | ✓                                   | ✓                            | ✓                                | ✓                         |                               |
| Investigate and analyse a range of existing products   | Evaluate                                      | ✓  | ✓                                   | ✓                            | ✓                                | ✓                         | ✓                             |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work   | Evaluate                                      | ✓  | ✓                                   | ✓                            | ✓                                | ✓                         | ✓                             |

\*Units that are included in the condensed curriculum

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 2 - National curriculum Design and technology content  | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Lower key stage 2 - Year 4 |                                    |                             |                                 |                          |                               |
|--|---|--|------------------------------------|-----------------------------|---------------------------------|--------------------------|-------------------------------|
|  |   | <a href="#">*Pavilions</a>                         | <a href="#">*Adapting a recipe</a> | <a href="#">*Fastenings</a> | <a href="#">*Slingshot cars</a> | <a href="#">*Torches</a> | <a href="#">Mindful timer</a> |
| Understand how key events and individuals in design and technology have helped shape the world   | Evaluate                                      |  |                                    |                             | ✓                               | ✓                        |                               |
| Apply their understanding of how to strengthen, stiffen and reinforce more complex structures  | Technical knowledge                           | ✓  |                                    |                             |                                 |                          |                               |
| Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]                         | Technical knowledge                           |  |                                    |                             | ✓                               |                          |                               |
| Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] | Technical knowledge                           |  |                                    |                             |                                 | ✓                        |                               |
| Apply their understanding of computing to program, monitor and control their products  | Technical knowledge                           |  |                                    |                             |                                 |                          | ✓                             |
| Understand and apply principles of a healthy and varied diet   | Cooking and nutrition                         |  | ✓                                  |                             |                                 |                          |                               |
| Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques   | Cooking and nutrition                         |  | ✓                                  |                             |                                 |                          |                               |
| Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed                          | Cooking and nutrition                         |  | ✓                                  |                             |                                 |                          |                               |
| *Units that are included in the condensed curriculum   |   |  |                                    |                             |                                 |                          |                               |

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 2 - National curriculum Design and technology content   | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Upper key stage 2 - Year 5 |                               |                              |                           |                          |                                     |
|---|---|--|-------------------------------|------------------------------|---------------------------|--------------------------|-------------------------------------|
|   |   | <a href="#">*What could be healthier?</a>          | <a href="#">*Pop-up books</a> | <a href="#">Stuffed toys</a> | <a href="#">*Doodlers</a> | <a href="#">*Bridges</a> | <a href="#">*Monitoring devices</a> |
| 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             | Design  | ✓  | ✓                             | ✓                            | ✓                         | ✓                        | ✓                                   |
| Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design   | Design  | ✓  | ✓                             | ✓                            |                           | ✓                        | ✓                                   |
| Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately                                      | Make  |  | ✓                             | ✓                            | ✓                         | ✓                        |                                     |
| 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 | Make  | ✓  | ✓                             | ✓                            |                           | ✓                        |                                     |
| Investigate and analyse a range of existing products  | Evaluate                                      |  | ✓                             | ✓                            | ✓                         | ✓                        |                                     |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work  | Evaluate                                      |  | ✓                             | ✓                            | ✓                         | ✓                        | ✓                                   |

\*Units that are included in the condensed curriculum

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 2 - National curriculum Design and technology content  | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Upper key stage 2 - Year 5 |                               |                              |                           |                          |                                     |
|--|---|--|-------------------------------|------------------------------|---------------------------|--------------------------|-------------------------------------|
|  |   | <a href="#">*What could be healthier?</a>          | <a href="#">*Pop-up books</a> | <a href="#">Stuffed toys</a> | <a href="#">*Doodlers</a> | <a href="#">*Bridges</a> | <a href="#">*Monitoring devices</a> |
| Understand how key events and individuals in design and technology have helped shape the world   | Evaluate                                      | ✓  |                               |                              |                           |                          | ✓                                   |
| Apply their understanding of how to strengthen, stiffen and reinforce more complex structures  | Technical knowledge                           |  |                               |                              | ✓                         | ✓                        | ✓                                   |
| Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]                         | Technical knowledge                           |  | ✓                             |                              |                           |                          |                                     |
| Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] | Technical knowledge                           |  |                               |                              | ✓                         |                          |                                     |
| Apply their understanding of computing to program, monitor and control their products  | Technical knowledge                           |  |                               |                              |                           |                          | ✓                                   |
| Understand and apply principles of a healthy and varied diet   | Cooking and nutrition                         | ✓  |                               |                              |                           |                          |                                     |
| Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques   | Cooking and nutrition                         | ✓  |                               |                              |                           |                          |                                     |
| Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed                          | Cooking and nutrition                         | ✓  |                               |                              |                           |                          |                                     |

\*Units that are included in the condensed curriculum

# National Curriculum by Kapow Primary's themes and topics

| Key Stage 2 - National curriculum Design and technology content   | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Upper key stage 2 - Year 6 |                                |                                   |                              |                                       |                            |
|---|---|--|--------------------------------|-----------------------------------|------------------------------|---------------------------------------|----------------------------|
|   |   | <a href="#">*Come dine with me</a>                 | <a href="#">*Automata toys</a> | <a href="#">*Steady hand game</a> | <a href="#">*Playgrounds</a> | <a href="#">*Navigating the world</a> | <a href="#">Waistcoats</a> |
| 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             | Design  | ✓  | ✓                              | ✓                                 | ✓                            | ✓                                     | ✓                          |
| Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design   | Design  |  | ✓                              | ✓                                 | ✓                            | ✓                                     | ✓                          |
| Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately                                      | Make  |  | ✓                              | ✓                                 | ✓                            | ✓                                     | ✓                          |
| 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 | Make  | ✓  |                                | ✓                                 | ✓                            |                                       | ✓                          |
| Investigate and analyse a range of existing products  | Evaluate                                      |  | ✓                              | ✓                                 | ✓                            |                                       | ✓                          |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work  | Evaluate                                      |  | ✓                              | ✓                                 | ✓                            | ✓                                     | ✓                          |
| *Units that are included in the condensed curriculum  |   |  |                                |                                   |                              |                                       |                            |



# National Curriculum by Kapow Primary's themes and topics

| Key Stage 2 - National curriculum Design and technology content  | Kapow Primary's Design and technology strands | Kapow Primary topics<br>Upper key stage 2 - Year 6 |                                |                                   |                              |                                       |                            |
|--|---|--|--------------------------------|-----------------------------------|------------------------------|---------------------------------------|----------------------------|
|  |   | <a href="#">*Come dine with me</a>                 | <a href="#">*Automata toys</a> | <a href="#">*Steady hand game</a> | <a href="#">*Playgrounds</a> | <a href="#">*Navigating the world</a> | <a href="#">Waistcoats</a> |
| Understand how key events and individuals in design and technology have helped shape the world   | Evaluate                                      | ✓  | ✓                              | ✓                                 |                              |                                       |                            |
| Apply their understanding of how to strengthen, stiffen and reinforce more complex structures  | Technical knowledge                           |  |                                |                                   | ✓                            |                                       |                            |
| Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]                         | Technical knowledge                           |  | ✓                              |                                   |                              |                                       |                            |
| Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] | Technical knowledge                           |  |                                | ✓                                 |                              |                                       |                            |
| Apply their understanding of computing to program, monitor and control their products  | Technical knowledge                           |  |                                |                                   |                              | ✓                                     |                            |
| Understand and apply principles of a healthy and varied diet   | Cooking and nutrition                         | ✓  |                                |                                   |                              |                                       |                            |
| Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques   | Cooking and nutrition                         | ✓  |                                |                                   |                              |                                       |                            |
| Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed                          | Cooking and nutrition                         | ✓  |                                |                                   |                              |                                       |                            |

\*Units that are included in the condensed curriculum

# Cross-curricular links - Year 1

| National curriculum subjects | Kapow Primary topics   |  |   |  |  |
|------------------------------|--|--|---|--|--|
|                              | * <a href="#">Fruit and vegetables</a>   | * <a href="#">Making a moving story book</a>                       | * <a href="#">Constructing a windmill</a>   | * <a href="#">Puppets</a>  | * <a href="#">Wheels and axles</a>                               |
| English                      |  | Reading - appreciating rhymes such as Humpty Dumpty                |   | Reading - Listening to and answering questions about the main character's appearance in Little Red Riding Hood (or another story of your choice) |  |
| Maths                        |  |  | Recognising 2D and 3D shapes, beginning to recognise how a net can make a 3D shape  |  | Identifying lengths on their design, considering how wheels work |
| Science                      | Thinking scientifically - classifying fruit and vegetables<br>Animals, including humans - learning about the importance of fruit and vegetables in the diet and food hygiene |  |   |  |  |
| Art and design               |  | Drawing the background of their design along with the moving parts |   |  |  |
| Computing                    |  |  |   |  | Digitally painting a flag for their car (extension activity)     |
| Geography                    |  |  | Learning about how windmills are used today to generate electricity (wind turbines) |  |  |

# Cross-curricular links - Year 2

| National curriculum subjects | Kapow Primary topics  |   |   |   |   |
|------------------------------|---|---|---|---|---|
|                              | * <a href="#">Fairground wheel</a>  | * <a href="#">A balanced diet</a>   | * <a href="#">Making a moving monster</a> | * <a href="#">Baby bear's chair</a>                                   | * <a href="#">Pouches</a>                       |
| English                      |   | Reading - reading a letter and summarising the key points                                 |   | Reading - discussing the events from 'Goldilocks and the three bears' |   |
| Maths                        | Talking about 3d shapes and naming them correctly   | Using inequalities signs (<>) to compare sugar in drinks, using grams (g) to give weights | Recording a tally survey                  | Creating 3D shapes from playdough, Recording totals on a tally chart  |   |
| Science                      | Discussing the properties of materials when choosing materials for their fairground wheel | Discussing the senses that humans have, having an awareness of food hygiene               |   | Interpreting the results of the tip-test                              |   |
| Art and design               |   |   | Sketching design ideas                    |   | Decorating the pouch using a range of materials |
| Computing                    | Practising drag and drop skills by creating an inspiration board (extension activity)     |   |   |   |   |
| Geography                    |   |   |   | Identifying natural and man-made structures                           |   |

# Cross-curricular links - Year 3

| National curriculum subjects | Kapow Primary topics   |  |   |   |  |  |
|------------------------------|--|--|---|---|--|--|
|                              | * <a href="#">Cross-stitch and appliqué Cushions</a> or <a href="#">Egyptian collars</a>   | <a href="#">Electric poster</a>  | * <a href="#">Pneumatic toys</a>                                | * <a href="#">Electronic charm</a>  | * <a href="#">Eating seasonally</a>  | * <a href="#">Castles</a>  |
| English                      |  |  |   | Reading - considering language on sales displays and how it persuades us to buy the product   | Reading - following the instructions in a recipe   |  |
| Maths                        | Choosing a 2D shape for their cushion, using knowledge of length to leave correct space for stuffing, seam and running stitch length |  |   | Drawing and manipulating 2D shapes, working with nets of 3D shapes (extension activity)   |  | Identifying and naming 2D and 3D shapes in castle structures, drawing 2D shapes, constructing nets to make 3D shapes |
| Science                      |  | Electricity (Y4) - building a simple circuit and identifying components of a circuit |   |   |  |  |
| Art and design               | Designing a theme for their applique shapes (maybe around another topic)   |  | Decorating their pneumatic toys with embellishments             |   |  |  |
| Computing                    |  |  |   | Learning about the history of Computers and how they have developed over time into smart wearables today, writing a programme to enable an LED to flash on a button press, using CAD software to design |  | Using powerpoint to create their own net (extension activity)  |
| Geography                    |  |  | Discussing how electricity can be made using wind and sea power |   | Knowing what climate is and that it affects food growth, reading information from a map of the world, knowing the environmental impact of importing food |  |
| History                      | Learning about Egyptian collars (If you choose the Egyptian collars theme for this unit)   | Creating posters that give information about Ancient Rome                            |   | Learning about the Digital revolution and the history of computers  |  | Learning about the features of castles and their purpose   |
| RSE/PSHE                     |  |  |   |   | Considering food hygiene, knowing that fruit and vegetables give us nutritional benefits   |  |

# Cross-curricular links - Year 4

| National curriculum subjects | Kapow Primary topics  |   |  |   |  |  |
|------------------------------|---|---|--|---|--|--|
|                              | * <a href="#">Torches</a>   | * <a href="#">Making a slingshot car</a>  | <a href="#">Mindful moments timer</a>  | * <a href="#">Adapting a recipe</a>   | * <a href="#">Pavilions</a>                                      | * <a href="#">Fastenings</a>               |
| English                      |   |   |  | Spoken language - giving a brief pitch for their biscuit recipe                   |  |  |
| Maths                        |   | Using nets to create 3D shapes, measuring accurately                                      | Creating a 3D structure using a net  | Completing a budget, considering profit margins, using nets to create 3D packages | Building 3D shapes to test the strength of different structures  |  |
| Science                      | <b>Electricity</b> - Identifying electrical products, conductors and insulators, building a simple series circuit with a switch | <b>Forces</b> - understanding the concept of air resistance (Y5) when designing their car |  |   |  |  |
| Art and design               |   | Decorating the panels of the chassis  | Decorating their mindful moments timer case  |   | Creating textural effects with materials to clad their structure |  |
| Computing                    |   |   | Programming a micro:bit to function as a timer, debugging code, using software to create logos |   |  | Taking photographs of fastenings they find |
| Geography                    |   | Considering eco-friendly ways of powering cars  |  |   |  |  |
| History                      | Learning about life before electricity  | Considering life before the motor car   |  |   |  |  |
| RSE/PSHE                     | Identifying electrical hazards  |   | Sharing ways to be mindful and how this helps us to look after our mental health               | Following basic food hygiene  |  |  |

# Cross-curricular links - Year 5

| National curriculum subjects | Kapow Primary topics                                       |  |  |   |   |                              |
|------------------------------|--|--|--|---|---|------------------------------|
|                              | * <a href="#">Pop-up books</a>                             | * <a href="#">Doodlers</a>   | * <a href="#">Monitoring devices</a>   | * <a href="#">What could be healthier?</a>  | * <a href="#">Bridges</a>   | <a href="#">Stuffed toys</a> |
| English                      | Adding captions to their pop-up books to suit the audience | <b>Writing</b> - writing instructions on how to make a Doodler   |  |   |   |                              |
| Maths                        |  |  |  |   | Measuring wood accurately to the nearest mm, draw 45° angles  |                              |
| Science                      |  | <b>Electricity</b> -Exploring electrical circuit, identifying and naming components, working investigatively and drawing conclusions | <b>Animals, including humans</b> - finding out about the needs of animals  |   | Using investigative methods to test the strength of a range of bridges, considering properties of materials |                              |
| Art and design               | Drawing components for their pop-up books                  |  |  | Designing a label for their bolognaise  |   |                              |
| Computing                    |  |  | Using search engines to research animals, programming and debugging an animal monitor, using CAD skills to create virtual models | Using search engines to research variations of a recipe   |   |                              |
| Geography                    |  |  | Considering how we can use the six Rs of sustainability to develop more sustainable habits                                       |   |   |                              |
| History                      |  |  | Learning about how thermometers have developed, learning about the history behind plastic use                                    |   |   |                              |
| RSE/PSHE                     |  |  | Considering our shared responsibilities for protecting the environment   | Considering the rights of animals and the ethical issues behind cattle farming, understanding what makes a balanced diet, reading nutritional values and deciding which recipe is healthier |   |                              |

# Cross-curricular links - Year 6

| National curriculum subjects | Kapow Primary topics   |  |  |                            |   |  |
|------------------------------|--|--|--|----------------------------|---|--|
|                              | <a href="#">* Navigating the world</a>   | <a href="#">* Come dine with me</a>  | <a href="#">* Playgrounds</a>                                    | <a href="#">Waistcoats</a> | <a href="#">* Steady hand game</a>                              | <a href="#">* Automata toys</a>        |
| English                      | Reading - finding key points in a clients letter to create design criteria<br>Spoken language - presenting a pitch about their product |  |  |                            |   |  |
| Maths                        |  |  | Measuring accurately to the nearest mm                           |                            | Using net templates to create the base of their game            | Measuring accurately to the nearest mm |
| Science                      | Considering materials and their functional properties  | Recognising the impact of diet on our bodies   |  |                            | Drawing circuit diagrams, naming components and their functions |  |
| Art and design               |  |  | Creating textural effects with materials to clad their structure |                            | Exploring one line drawings                                     |  |
| Computing                    | Programming a compass (all), pedometer and a light/thermometer (extension), using CAD skills to produce a virtual model                |  |  |                            | Recapping rules for safe online searching                       |  |
| Geography                    | Considering sustainability in design   |  |  |                            |   |  |
| History                      |  |  |  |                            |   | Learning about Victorian toys          |
| RSE/PSHE                     |  | Considering different dishes from other cultures, developing awareness of healthy eating, following basic food hygiene |  |                            |   |  |

## Version history

This page shows recent updates to the document.

| Date     | Update  |
|----------|---|
| 26.07.22 | Cross curricular links added p.16-p.21        |
| 19.08.22 | Alternative theme DT: Egyptian collars added. |
| 09.11.22 | Updated to include EYFS.                      |