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|  | Nursery | Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Autumn 1 |   | **Structures: junk****modelling** N.CDevelop small motor skills so that they can use a range of tools competently, safely and confidently. ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery. | **Structures:****Moving story books**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsExplore and evaluate a range of existing productsEvaluate their ideas and products against the design criteriaExplore and use mechanisms (for example levers, sliders, wheels and axles) in their products | **Mechanisms: fairground wheel**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsExplore and evaluate a range of existing productsEvaluate their ideas and products against the design criteriaBuild structures, exploring how they can be made stronger, stiffer and more stable.Explore and use mechanisms (for example levers, sliders, wheels and axles) in their products | **Textiles: cross stitch and applique**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesEvaluate their ideas and products against their own design criteria and consider the views of others to improve their work | **Electrical systems: torches**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand how key events and individuals in design and technology have helped shape the worldUnderstand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] | **Mechanical systems: eco-bike with gears**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] | **Digital world: navigating the world**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelyEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workApply their understanding of computing to program, monitor and control their products |
| Autumn 2 |  | **Cooking and nutrition: soup**N.CLearn new vocabulary. -Use new vocabulary throughout the day. ELG: Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. Personal, social and emotional development -Know and talk about the different factors that support their overall health and wellbeing: healthy eating. ELG: Managing selfManage their own basic hygiene and personal needs, including… understanding the importance of healthy food choices. Physical development -Develop small motor skills so that they can use a range of tools competently, safely and confidently. ELG: Use a range of small tools, including scissors, paint brushes and cutlery. | **Structures: constructing a windmill**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsExplore and evaluate a range of existing productsEvaluate their ideas and products against the design criteriaExplore and use mechanisms (for example levers, sliders, wheels and axles) in their products | **Cooking and nutrition: balanced diet**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsExplore and evaluate a range of existing productsEvaluate their ideas and products against the design criteriaUse basic principles of a healthy and varied diet to prepare dishesUnderstand where food comes from.  | **Electrical systems: electric poster**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] | **Mechanical systems: making a slingshot car**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand how key events and individuals in design and technology have helped shape the worldUnderstand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] | **Digital world: monitoring devices**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand how key events and individuals in design and technology have helped shape the worldApply their understanding of how to strengthen, stiffen and reinforce more complex structuresApply their understanding of computing to program, monitor and control their products | **Cooking and nutrition: come dine with me**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand and apply the principles of a healthy and varied dietPrepare and cook a variety of predominantly savoury dishes using a range of cooking techniquesUnderstand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed |
| Spring 1 |  | **Textiles:****Bookmarks**Physical developmentELG- Develop small motor skills so that they can use a range of tools competently, safely and confidently. ELG: Fine Motor SkillsUse a range of small tools, including scissors, paint brushes and cutlery | **Textiles: puppets**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsEvaluate their ideas and products against the design criteria | **Mechanisms: making a moving monster**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsExplore and evaluate a range of existing productsEvaluate their ideas and products against the design criteria | **Mechanical systems: pneumatic toys**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand how key events and individuals in design and technology have helped shape the worldUnderstand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] | **Digital world: mindful moments timer**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelyInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workApply their understanding of computing to program, monitor and control their products  | **Cooking and nutrition: developing a recipe**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand how key events and individuals in design and technology have helped shape the worldApply their understanding of computing to program, monitor and control their products Understand and apply the principles of a healthy and varied dietPrepare and cook a variety of predominantly savoury dishes using a range of cooking techniquesUnderstand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed | **Structures: playgrounds**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workApply their understanding of how to strengthen, stiffen and reinforce more complex structures |
| Spring 2 |  | **Structures:****Boats**Communication and language Articulate their ideas and thoughts in well-formed sentences. Connect one idea or action to another using a range of connectives. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. ‘ELG: SpeakingParticipate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. ELG: Speaking- Offer explanations for why things might happen | Mechanisms: wheels and axlesN.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsExplore and evaluate a range of existing productsEvaluate their ideas and products against the design criteriaExplore and use mechanisms (for example levers, sliders, wheels and axles) in their products | **Structures: Baby Bear’s chair**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsEvaluate their ideas and products against the design criteriaBuild structures, exploring how they can be made stronger, stiffer and more stable. | **Digital world: wearable technology**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand how key events and individuals in design and technology have helped shape the worldApply their understanding of computing to program, monitor and control their products  | **Cooking and nutrition: adapting a recipe**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workPrepare and cook a variety of predominantly savoury dishes using a range of cooking techniques | **Structures: bridges**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workApply their understanding of how to strengthen, stiffen and reinforce more complex structures | **Textiles: waistcoats**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their work |
| Summer 1 |  | **Seasonal projects:**Understanding the world -Explore the natural world around them.ELG: The Natural World>Explore the natural world around them, making observations and drawing pictures of animals and plants. Expressive Arts and Design -Explore, use and refine a variety of artistic effects to express ideas and feelings. ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. ELG: Creating with materials> Share their creations, explaining the process they have used. | **Cooking and nutrition: smoothies**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsEvaluate their ideas and products against the design criteriaUse basic principles of a healthy and varied diet to prepare dishesUnderstand where food comes from.  | **Textiles: pouches**N.CDesign purposeful, functional, appealing products for themselves and other users based on design criteria.Generate, develop, model and communicate their ideas through talking, drawing. Templates, mock-ups, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing).Select from and use a wide variety of materials and components, including construction materials, textiles, and ingredients according to their characteristicsExplore and evaluate a range of existing productsEvaluate their ideas and products against the design criteria | **Cooking and nutrition: eating seasonally**N.CGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesUnderstand and apply the principles of a healthy and varied dietPrepare and cook a variety of predominantly savoury dishes using a range of cooking techniquesUnderstand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed | **Structures: constructing a castle**N.C 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 groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workApply their understanding of how to strengthen, stiffen and reinforce more complex structures | **Textiles: stuffed toys**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their work | **Electrical systems: steady hand game**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand how key events and individuals in design and technology have helped shape the worldUnderstand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] |
| Summer 2 |  |  |  |  | **Structures: constructing a castle**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workApply their understanding of how to strengthen, stiffen and reinforce more complex structures | **Textiles: fastening**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelySelect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their work | **Electrical systems: doodlers**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelyInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workApply their understanding of how to strengthen, stiffen and reinforce more complex structuresUnderstand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] | **Mechanical systems: Automata toys**N.CUse research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsGenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designSelect from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accuratelyInvestigate and analyse a range of existing productsEvaluate their ideas and products against their own design criteria and consider the views of others to improve their workUnderstand how key events and individuals in design and technology have helped shape the worldUnderstand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] |