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| **Autumn** – Seasonal Food & Healthy Eating (Food & Nutrition)**Learning Outcomes** – * I can research the benefits of eating a balanced diet.
* I can recognise why a healthy diet is important.
* I can plan a recipe for stuffed peppers.
* I can design a healthy dish.
* I can make and evaluate stuffed peppers.
* I know how seasonal fruits in Britain are grown and processed.
* I know that food can be grown, caught, reared or processed.
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| **Throughout the year*** Describe the purpose of their products
* Share and clarify ideas through discussion
* Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas
* Explain their choice of tools and equipment in relation to the skills and techniques they will be using
* Explain their choice of materials and components according to functional properties and aesthetic qualities
* Apply a range of finishing techniques, including those from art and design, with some accuracy
* Refer to their design criteria as they design and make
* Evaluation: Use their design criteria to evaluate their completed products and identify the strengths and areas for development in their ideas and products
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| **Skills:** | **Design*** Show design meets a range of requirements
* Produce a plan and explain it to others - Say how realistic plan is.
* Include an annotated sketch
* Make and explain design decisions considering availability of resources
 | **Make*** Select suitable tools and equipment
* Select appropriate ingredients, fit for purpose; explain choices
* Work through plan in order.
* Realise if product is going to be good quality
* Measure, cut and shape ingredients with some accuracy
* Assemble and combine ingredients with some accuracy
 | **Evaluate*** Refer to design criteria to evaluate product
* Begin to explain how I could improve original design
* Discuss by whom, when and where products were designed
* Know about chefs
 | **Technical Knowledge – Food & Nutrition*** Explain how to be safe/hygienic
* Think about presenting product in interesting/ attractive ways
* Understand ingredients can be fresh, pre-cooked or processed
* Begin to understand about food being grown, reared or caught in the UK or wider world
* Describe eat well plate and how a healthy diet=variety / balance of food and drinks
* Explain importance of food and drink for active, healthy bodies
* Prepare and cook some dishes safely and hygienically
* Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
 | **Vocabulary*** Fruit
* Vegetables
* Ingredients
* Produce
* Eatwell plate
* Dairy
* Carbohydrates
* Protein
* Fats
* Fresh
* Combine
* Preparation
* Health
* Balanced diet
* Design
* Evaluate
* Research
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| **Spring** – Alarms (Electronics)**Learning Outcomes** – * I can research what alarm systems are used for and how different types of switches are activated.
* I can investigate how to create circuits with a variety of different switches.
* I can design an alarm system for a particular purpose.
* I can make an alarm system based on a design.
* I can evaluate a finished alarm system.
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| **Throughout the year*** Describe the purpose of their products
* Share and clarify ideas through discussion
* Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas
* Explain their choice of tools and equipment in relation to the skills and techniques they will be using
* Explain their choice of materials and components according to functional properties and aesthetic qualities
* Apply a range of finishing techniques, including those from art and design, with some accuracy
* Refer to their design criteria as they design and make
* Evaluation: Use their design criteria to evaluate their completed products and identify the strengths and areas for development in their ideas and products
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| **Skills:** | **Design*** Show design meets a range of requirements and is fit for purpose
* Begin to create own design criteria
* Have at least one idea about how to create product
* Produce a plan and explain it to others - - Say how realistic plan is.
* Include an annotated sketch
* Make and explain design decisions considering availability of resources
* Explain how product will work
* Make a prototype
* Begin to use computers to show design.
 | **Make*** Select suitable tools and equipment, explain choices in relation to required techniques and use accurately
* Select appropriate materials, fit for purpose; explain choices
* Work through plan in order.
* Assemble, join and combine materials and components with some accuracy
 | **Evaluate*** Refer to design criteria to evaluate product
* Begin to explain how I could improve original design
* Evaluate existing products, considering: how well they’ve been made, materials, whether they work, how they have been made, fit for purpose
* Discuss by whom, when and where products were designed
* Research whether products can be recycled or reused
* Know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products
 | **Technical Knowledge – Electronics*** Use simple circuit in product
* Use number of components in circuit
 | **Vocabulary*** Circuit
* Alarm
* Negative
* Positive
* Connect
* Wire
* Sound
* Power Source
* Control
* Push-to-make
* Push-to-break
* Design
* Evaluate
* Research
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| **Summer** – Aqueducts (Structures)**Learning Outcomes** – * I can research and explore the purpose, function and design of Aqueducts.
* I can explore different materials for structure, strength, durability and water resistance and how they can be combined.
* I can design and label an aqueduct, thinking about the form it will take and how it will work.
* I can construct the final product, test its function and revaluate its efficiency.
* I can evaluate the prototype and consider materials for the final product
* I can use mathematical skills to measure and scale
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| **Throughout the year*** Describe the purpose of their products
* Share and clarify ideas through discussion
* Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas
* Explain their choice of tools and equipment in relation to the skills and techniques they will be using
* Explain their choice of materials and components according to functional properties and aesthetic qualities
* Apply a range of finishing techniques, including those from art and design, with some accuracy
* Refer to their design criteria as they design and make
* Evaluation: Use their design criteria to evaluate their completed products and identify the strengths and areas for development in their ideas and products
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| **Skills:** | **Design*** Use research for design ideas
* Show design meets a range of requirements and is fit for purpose
* Have at least one idea about how to create product and suggest improvements for design.
* Produce a plan and explain it to others - - Say how realistic plan is.
* Include an annotated sketch
* Make and explain design decisions considering availability of resources
* Make a prototype
 | **Make*** Select suitable tools and equipment, explain choices in relation to required techniques and use accurately
* Select appropriate materials, fit for purpose; explain choices
* Work through plan in order.
* Measure, mark out, cut and shape materials/components with some accuracy
* Assemble, join and combine materials and components with some accuracy
 | **Evaluate*** Refer to design criteria to evaluate product
* Begin to explain how I could improve original design
* Evaluate existing products, considering: how well they’ve been made, materials, whether they work, how they have been made, fit for purpose
* Discuss by whom, when and where products were designed
* Know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products
 | **Technical Knowledge – Structures*** Measure carefully to avoid mistakes
* Attempt to make product strong
* Continue working on product even if original didn’t work
* Make a strong, stiff structure
 | **Vocabulary*** Water bridge
* Sanitation
* Waterway
* Engineering
* Arches
* Romans
* Function
* Arcade
* Construction
* Design
* Evaluate
* Research
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