|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Foundation Stage** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Designing** | Work within different contexts such as story based, home, school, playground  Generate ideas from existing examples  Begin to talk about their designs | Work within different contexts such as story based, home, school, playground  State what products they are designing and making and say whether their product is for themselves or others.  Use existing knowledge to generate their own original designs.  Begin to develop and communicate ideas by talking and drawing. | Work confidently within a range of contexts e.g. imaginary, local community, industry and wider environment.  State what products they are designing and making and say whether their product is for themselves or others and what it is for.  Say how their products will work and how they’re suitable for the intended users.  Use simple design criteria to help develop their ideas.  Generate ideas by drawing on their own experiences.  Use knowledge of existing products to help come up with ideas.  Develop and communicate ideas by talking and drawing.  Model ideas by exploring materials, components, construction kits.  Make templates and mock-ups.  Use ICT where appropriate to develop and communicate ideas. | Work confidently within a range of contexts e.g. home, school, leisure, industry and wider environment.  Describe the purpose of their products.  Indicate design features of their products.  Gather information about the needs/wants of individuals or groups.  Develop their own design criteria.  Share and clarify ideas through discussion.  Model ideas using prototypes.  Use annotated diagrams and some computer-aided design packages, to develop and communicate ideas.  Generate realistic ideas, focussing on the needs of the user.  Begin to take account of the availability of resources. | Work confidently within a range of contexts e.g. home, school, leisure, industry and wider environment.  Describe the purpose of their products and indicate design features that will appeal to intended users.  Gather information about the needs/wants of individuals or groups.  Develop their own design criteria and use this to inform their ideas.  Share and clarify ideas confidently through discussion.  Model ideas using prototypes and pattern pieces.  Use annotated sketches, some cross-sectional drawings and computer-aided design packages to develop and communicate ideas.  Generate realistic ideas, focussing on the needs of the user.  Make design decisions that take account of the availability of resources. | Work confidently within a range of contexts e.g. home, school, leisure, industry and wider environment.  Describe in detail the purpose of their products and indicate design features that will appeal to intended users.  Carry out research e.g. surveys to identify user’s needs, wants and preferences.  Develop their own design criteria and use this to inform their ideas.  Develop a simple design specification to guide their thinking.  Share and clarify ideas confidently through discussion.  Model ideas using prototypes and pattern pieces.  Use annotated sketches, cross-sectional drawings, exploded diagrams and computer-aided design packages to develop and communicate ideas.  Generate realistic ideas, focussing on the needs of the user.  Make design decisions that take account of the availability of resources.  Generate innovative ideas from prior research.  Make design decisions based on time, cost and resources constraints. | Work confidently within a range of contexts e.g. home, school, leisure, industry and wider environment.  Describe in detail the purpose of their products and indicate design features that will appeal to intended users.  Carry out research e.g. surveys, questionnaires and web-based resources to identify user’s needs, wants and preferences.  Develop a detailed design specification to guide their thinking and planning.  Share and clarify ideas confidently through discussion.  Model ideas using prototypes and pattern pieces.  Use annotated sketches, cross-sectional drawings, exploded diagrams and computer-aided design packages to develop and communicate ideas.  Generate realistic ideas, focussing on the needs of the user.  Make design decisions that take account of the availability of resources.  Generate innovative ideas from prior research.  Make design decisions based on time, cost and resources constraints. |
| **Making** | Shows some planning skills by suggesting what to do next  Begins to follow safety procedures  Selects from a range of materials and components | Plans by suggesting what to do next.  Selects from a range of tools, materials and components.  Follows procedures for safety and hygiene.  Uses a range of materials, components, construction kits, textiles, food ingredients and mechanical products.  Measures, marks out, shapes and cuts most materials. | Plan by suggesting what to do next.  Selects from a range of tools, materials and components according to their characteristics and explain their choices.  Follow procedures for safety and hygiene.  Use a range of materials, components, construction kits, textiles, food ingredients and mechanical products.  Measure, mark out, cut, shape, assemble, join and combine a range of materials and components.  Begin to use finishing techniques including those from art and design sessions. | Select tools and equipment suitable to the task and explain their choices.  Select some materials and components suitable for the task.  Order the main stages of making.  Follow procedures for safety and hygiene.  Use a wide range of materials and components e.g. textiles, mechanical, construction kits, electrical, and food ingredients.  Measure, mark out, cut, shape, assemble, join and combine a range of materials and components with some accuracy.  Apply some finishing techniques. | Confidently select tools and equipment suitable to the task and explain their choices giving evidence.  Select materials and components suitable for the task.  Order the main stages of making in logical steps.  Follow procedures for safety and hygiene.  Use an extensive range of materials and components e.g. textiles, mechanical, construction kits, electrical, and food ingredients.  Measure, mark out, cut, shape, assemble, join and combine a range of materials and components with accuracy.  Accurately apply several finishing techniques. | Confidently select tools and equipment suitable to the task and explain their choices giving evidence.  Select materials and components suitable for the task.  Produce appropriate lists of tools, equipment and materials they will need.  Order the main stages of making in logical steps. Formulate step-by-step plans as a guide to making.  Use an extensive range of materials and components e.g. textiles, mechanical, construction kits, electrical, and food ingredients.  Measure, mark out, cut, shape, assemble, join and combine most materials and components with accuracy.  Accurately apply several finishing techniques including those from art and design sessions.  Use techniques that involve a number of steps.  Be resourceful when tackling practical problems. | Confidently select tools, equipment, materials and components suitable to the task and explain their choices giving evidence.  Produce appropriate lists of tools, equipment and materials they will need.  Order the main stages of making in logical steps. Formulate step-by-step plans as a guide to making.  Use an extensive range of materials and components e.g. textiles, mechanical, construction kits, electrical, and food ingredients.  Measure, mark out, cut, shape, assemble, join and combine most materials and components with accuracy.  Accurately apply several finishing techniques including those from art and design sessions.  Use techniques that involve a number of steps.  Use resourcefulness, resilience and innovation when tackling practical problems.  Explain next steps in learning drawing from prior experience. |
| **Evaluating** | Begin to talk about their design ideas and what they are making.  Think about how to make their products better  Begin to explore what products are, who they are for, how they are used and where they are from. | Talk about their design ideas and what they are making.  Talk about how to make their products better.  Explore what products are, what they are made from, who they are for, how they are used and where they are from.  Talk about likes and dislikes of existing products. | Talk about their ideas and what they are making.  Make simple judgements about their products and ideas against design criteria.  Talk and write about how to make their products better.  Explore what products are, what they are made from, who they are for, how they are used and where they might be used.  Talk about likes and dislikes of existing products. Give reasons. | Identify the strengths and areas for development in their ideas and products.  Consider the views of others.  Refer to their design criteria as they design and make.  Use the design criteria to evaluate their completed products.  Investigate and analyse how well products have been made; which materials and methods were used; how well the products worked; whether they achieved their purpose and the needs/wants of the users.  Recognise successful inventors, designers, chefs and engineers who have been influential in the DT industry. | Identify the strengths and areas for development in their ideas and products.  Consider the views of others, including intended users to improve their work.  Refer to their design criteria as they design and make.  Use the design criteria to evaluate their completed products.  Investigate and analyse how well products have been made; which materials and methods were used; how well the products worked; whether they achieved their purpose and the needs/wants of the users.  Investigate and analyse who designed a product; where and when products were designed and made; whether products can be recycled or re-used.  Recognise several successful inventors, designers, chefs, manufacturers and engineers who have been influential in the DT industry. | Identify the strengths and areas for development in their ideas and products.  Consider the views of others, including intended users to improve their work.  Refer to their design criteria as they design and make.  Use the design criteria to evaluate their completed products.  Critically evaluate the quality of the design, manufacture and fitness for purpose of their products.  Evaluate their ideas and products against their original design specification.  Investigate and analyse how well products have been made; which materials and methods were used; how well the products worked; whether they achieved their purpose and the needs/wants of the users.  Investigate and analyse who designed a product; where and when products were designed and made; whether products can be recycled or re-used.  Consider cost and sustainability.  Consider the impact and innovative qualities of their products.  Recognise several successful inventors, designers, chefs, manufacturers and engineers who have been influential in the DT industry. | Identify the strengths and areas for development in their ideas and products.  Consider the views of others, including intended users to improve their work.  Refer to their design criteria as they design and make.  Use the design criteria to evaluate their completed products.  Critically evaluate the quality of the design, manufacture and fitness for purpose of their products.  Evaluate their ideas and products against their original design specification.  Investigate and analyse how well products have been made; which materials and methods were used; how well the products worked; whether they achieved their purpose and the needs/wants of the users.  Investigate and analyse who designed a product; where and when products were designed and made; whether products can be recycled or re-used.  Investigate and analyse how much products cost; how innovative products are; how sustainable the materials in products are; what impact products have beyond their intended purpose.  Recognise several successful inventors, designers, chefs, manufacturers and engineers who have been influential in the DT industry. |
| **Technical Knowledge** | Recognise that a range of technology is used in places such as homes and schools.  Select and use technology for a particular purpose.  Show an interest in toys with buttons and mechanisms.  Begin to know about simple working characteristics of materials and components  Begin to understand the movement of simple mechanisms such as lever, sliders and wheels.  Know that food ingredients should be combined according to their sensory characteristics | Recognise that a range of technology is used in places such as homes and schools.  Select and use technology for particular purposes.  Know how to operate simple equipment and show an interest in toys with buttons and mechanisms and operate them successfully.  Understand the simple working characteristics of materials and components.  Know about the movement of simple mechanisms such as lever, sliders and wheels and axles.  Know that food ingredients should be combined according to their sensory characteristics.  Begin to use the correct technical vocabulary for projects. | Understand the working characteristics os materials and components.  Know about the movement of simple mechanisms such as levers, sliders, wheels and axles.  Recognise that food ingredients should be combined according to their sensory characteristics.  Understand how freestanding structures can be made stronger, stiffer and more stable.  Recognise that 3D textile products can be assembled from two identical fabric shapes.  Use correct technical vocabulary for products. | Know how to use learning from science and maths to help design and make products that work.  Understand that materials have functional and aesthetic qualities.  Recognise that materials can be combined and mixed to create more useful characteristics.  Know how mechanical systems such as levers and linkages create movement.  Know that simple electrical circuits and components can be used to create functional products.  Make strong, stiff shell structures.  Know that a single fabric shape can be used to make a 3D textile product.  Recognise several fresh, pre-cooked and processed foods. | Use learning from science, maths and other subjects to help design and make products that work.  Understand that materials have functional and aesthetic qualities and apply this knowledge successfully to their own products.  Recognise that materials can be combined and mixed to create more useful characteristics.  Know that mechanical and electrical systems have an input, process and output.  Know how mechanical systems such as levers and linkages create movement.  Know that simple electrical circuits and components can be used to create functional products.  Programme a computer to control their products.  Make strong, stiff shell structures for a purpose.  Know that a single fabric shape can be used to make a 3D textile product.  Recognise a range of fresh, pre-cooked and processed foods. | Use learning from science, maths and other subjects to help design and make products that work.  Understand that materials have functional and aesthetic qualities and apply this knowledge successfully to their own products.  Recognise that materials can be combined and mixed to create more useful characteristics.  Know that mechanical and electrical systems have an input, process and output.  Know how mechanical systems such as levers, linkages, cams, pulleys or gears create movement.  Know that simple electrical circuits and components can be used to create functional products.  Reinforce and strengthen a 3d framework.  Know that a combination of fabric shapes can be used to make a 3D textile product.  Adapt recipes by adding or substituting one or more ingredients.  Explore more complex electrical circuits and components.  Programme a computer to monitor changes in the environment and control their product. | Use learning from science, maths and several other subjects to help design, make and evaluate and make products that work.  Understand that materials have functional and aesthetic qualities and apply this knowledge successfully to their own products.  Recognise that materials can be combined and mixed to create more useful characteristics.  Know that mechanical and electrical systems have an input, process and output.  Know how mechanical systems such as levers, linkages, cams, pulleys or gears create movement.  Know that simple electrical circuits and components can be used to create functional products.  Reinforce and strengthen a 3d framework.  Know that a combination of fabric shapes can be used to make a 3D textile product.  Adapt recipes by adding or substituting a range of ingredients.  Explore more complex electrical circuits and components.  Programme a computer to monitor changes in the environment and control their product. |
| **Cooking & Nutrition** | Begin to recognise that food comes from plants and animals, and that food is farmed, grown, elsewhere or caught.  Begin to name and sort foods into the 5 groups in the Eatwell Plate.  Begin to recognise that everyone should eat at least 5 portions of fruit or vegetables a day.  Start to prepare simple dishes.  Use techniques such as cutting and peeling. | Recognise food comes from plants and animals, and that food is farmed, grown, elsewhere or caught.  Name and sort foods into the 5 groups in the Eatwell Plate.  Recognise that everyone should eat at least 5 portions of fruit or vegetables a day.  Prepare simple dishes.  Use techniques such as cutting, peeling and grating. | Know that food comes from plants and animals, and that food is farmed, grown, elsewhere or caught.  Name and sort foods into the 5 groups in the Eatwell Plate.  Recognise that everyone should eat at least 5 portions of fruit or vegetables a day.  Know how to prepare simple dishes, safely and hygienically without using a heat source.  Use techniques such as cutting, chopping, peeling and grating. | Know that food is farmed, reared, grown, elsewhere, imported or caught locally, regionally and internationally.  Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including the use of a heat source.  Know how to use a range of techniques such as chopping, peeling, slicing, grating, mixing, spreading, kneading and baking.  Recognise that a healthy diet is made up of a variety and balance of different foods and drinks as depicted on the Eatwell Plate.  Know that to be active and healthy, food is needed to provide energy to the body. | Know that food is farmed, reared, grown, elsewhere, imported or caught locally, regionally and internationally.  Know how to prepare and cook a variety of savoury and some sweet dishes safely and hygienically, including the use of a heat source.  Know how to use a wide range of techniques such as chopping, peeling, slicing, grating, mixing, spreading, kneading and baking.  Recognise that a healthy diet is made up of a variety and balance of different foods and drinks as depicted on the Eatwell Plate.  Know that to be active and healthy, food is needed to provide energy to the body. | Begin to know that seasons and weather effect food availability.  Begin to know how food is processed into ingredients that can be eaten or used in cooking.  Know how to prepare and cook a variety of savoury and some sweet dishes safely and hygienically, including the use of a heat source.  Know how to use a wide range of techniques such as chopping, peeling, slicing, grating, mixing, spreading, kneading and baking.  Recognise that a healthy diet is made up of a variety and balance of different foods and drinks as depicted on the Eatwell Plate.  Know that to be active and healthy, food is needed to provide energy to the body.  Know that different foods contain substances that are needed for health e.g. fibre, vitamins, nutrients. | Begin to know that seasons and weather effect food availability.  Begin to know how food is processed into ingredients that can be eaten or used in cooking.  Know how to prepare and cook a variety of savoury and some sweet dishes safely and hygienically, including the use of a heat source.  Know how to use a wide range of techniques such as chopping, peeling, slicing, grating, mixing, spreading, kneading and baking.  Recognise that a healthy diet is made up of a variety and balance of different foods and drinks as depicted on the Eatwell Plate.  Know that to be active and healthy, food is needed to provide energy to the body.  Understand that healthy diets must incorporate the correct amounts of food types and substances.  Understand that exercise is important for our fitness and wellbeing. |