DT NC objectives

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5**  | **Year 6** |
| Design **design 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 and, where appropriate, information and communication technology To draw a labelled picture of their design. Verbally communicate their design ideas.Make**select 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 range of materials and components, including construction materials, textiles and ingredients, according to their characteristics**Evaluate**evaluate their ideas and products against design criteria** Write one thing that was successful and one thing to improve. Technical knowledge**build 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**Cooking and nutrition**use the basic principles of a healthy and varied diet to prepare dishes** **understand where food comes from.** | Design **design 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 and, where appropriate, information and communication technology** To draw 2 labelled pictures of their design, choosing their favourite. Verbally communicate their design ideas to a partner. Make**select 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 range of materials and components, including construction materials, textiles and ingredients, according to their characteristics** Evaluate**explore and evaluate a range of existing products****evaluate their ideas and products against design criteria** Write two things that was successful and one thing to improve and why. Technical knowledge**build 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**Cooking and nutrition**use the basic principles of a healthy and varied diet to prepare dishes** **understand where food comes from.** | Design**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** **generate, develop, model and communicate their ideas through discussion**, **annotated sketches**, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Verbally communicate their design ideas small discussion group and group to offer opinion. Make **select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping,** **joining and finishing], accurately** **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** Evaluate **evaluate their ideas and products against their own design criteria** and consider the views of others to improve their work Technical knowledge **apply their understanding of how to strengthen, stiffen and reinforce more complex structures** (can incorporate either mechanical or electrical)Cooking and nutrition **understand and apply the principles of a healthy and varied diet****prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques** **understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.** | Design**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** To analyse existing products to give design ideas. **generate, develop, model and communicate their ideas through** discussion, annotated sketches, **cross-sectional and exploded diagrams**, prototypes, pattern pieces and computer-aided design Verbally communicate their design process.To question and give constructive opinion on others designs. Make **select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately****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** Evaluate **evaluate their ideas and products against their own design criteria and consider the views of others to improve their work** Technical knowledge **understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]** Cooking and nutrition **understand and apply the principles of a healthy and varied diet****prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques** **understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.** | Design**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** To analyse a range of existing products to give design ideas.**generate, develop, model and communicate their ideas through** discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and **computer-aided design** Verbally discuss whether a computer aided design is more effective than other ways of designing. Make **select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately** **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** Evaluate **investigate and analyse a range of existing products** **evaluate their ideas and products against their own design criteria and consider the views of others to improve their work** Technical knowledge **understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]** **apply their understanding of computing to program, monitor and control their products.**Cooking and nutrition **prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques**  | Design**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** **generate, develop, model and communicate their ideas through** discussion, annotated sketches, cross-sectional and exploded diagrams, **prototypes**, **pattern pieces and** computerEvaluate and make changes to a made or designed prototype. Make **select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately** **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** Evaluate **investigate and analyse a range of existing products** **evaluate their ideas and products against their own design criteria and consider the views of others to improve their work** **understand how key events and individuals in design and technology have helped shape the world** Technical knowledge **apply their understanding of computing to program, monitor and control their products.**To learn at least 3 different stitches in order to create a finished product e.g book mark, bag, coaster. Cooking and nutrition **prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques**  |