**Design & Technology**

At primary level, both KS1 and KS2 the design and technology curriculum has hardly changed in any meaningful way. There is a small change at KS2 where students are now required to communicate using a specific list of methods, see below.

**KS.1 Programmes of Study**

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| **Curriculum 2000** | **New Curriculum** | **Changes** |
| **Aims**During key stage 1 pupils learn: * how to think imaginatively
* and talk about what they like and dislike when designingand making.
* They build on their early childhood experiences of investigating objects around them.
* They explore how familiar things work
* and talk about, draw and model their ideas.
* to design and make safely and could start to use ICT as part of their designingand making.
 | **Aims**Through a variety of creative and practical activities, pupils should be taught:* the knowledge, understanding and skills needed to engage in an iterative process of designing and making.
* They should work in a range of relevant contexts, [such as the home and school, gardens and playgrounds, the local community, industry and the wider environment.]
 | No change |
| **Developing, planning and communicating ideas**1. Pupils should be taught to:* generate ideas by drawing on their own and other people's experiences
* develop ideas by shaping materials and putting together components
* talk about their ideas
* plan by suggesting what to do next as their ideas develop
* communicate their ideas using a variety of methods, including drawing and making models
 | **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
 | No change |
| **Working with tools, equipment, materials and components to make quality products**Pupils should be taught to:* select tools, techniques and materials for making their product from a range suggested by the teacher
* explore the sensory qualities of materials
* measure, mark out, cut and shape a range of materials
* assemble, join and combine materials and components
* use simple finishing techniques to improve the appearance of their product, using a range of equipment
* follow safe procedures for food safety and hygiene.
 | **Make** * select from and use a range of tools and equipment to perform practical tasks [such as 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
 | No change |
| **Evaluating processes and products**Pupils should be taught to:* talk about their ideas, saying what they like and dislike
* identify what they could have done differently or how they could improve their work in the future.
 | **Evaluate** * explore and evaluate a range of existing productsevaluate their ideas and products against design criteria
 | No change |
| **Knowledge and understanding of materials and components**Pupils should be taught to:* about the working characteristics of materials
* how mechanisms can be used in different ways
 | **Technical knowledge** * build structures, exploring how they can be made stronger, stiffer and more stable
* explore and use mechanisms, [such as levers, sliders, wheels and axles], in their products.
 | No change |
| **Breadth of study*** investigating and evaluating a range of familiar products
* focused practical tasks that develop a range of techniques, skills, processes and knowledge
* design and make assignments using a range of materials, including food, items that can be put together to make products, and textiles.
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**KS.2 Programmes of Study**

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| **Curriculum 2000** | **New Curriculum** | **Changes** |
| **Aims**During key stage 2 pupils: * work on their own and as part of a team on a range of designing and making activities.
* They think about what products are used for and the needs of the people who use them.
* They plan what has to be done and identify what works well and what could be improved in their own and other people’s designs.
* They draw on knowledge and understanding from other areas of the curriculum and use computers in a range of ways.
 | **Aims**Through a variety of creative and practical activities, pupils should be taught: * the knowledge, understanding and skills needed to engage in an iterative process of designing and making.
* They should work in a range of relevant contexts, [such as the home, school, leisure, culture, enterprise, industry and the wider environment.]
 | No change |
| **Developing, planning and communicating ideas**1. Pupils should be taught to:* generate ideas for products after thinking about who will use them and what they will be used for, using information from a number of sources, including ICT-based sources
* develop ideas and explain them clearly, putting together a list of what they want their design to achieve
* plan what they have to do, suggesting a sequence of actions and alternatives, if needed
* communicate design ideas in different ways as these develop, bearing in mind aesthetic qualities, and the uses and purposes for which the product is intended.
 | **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
 | New curriculum includes a list of ways for students to communicate their ideas:*annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design*  |
| **Working with tools, equipment, materials and components to make quality products**Pupils should be taught to:* select appropriate tools and techniques for making their product
* suggest alternative ways of making their product, if first attempts fail
* explore the sensory qualities of materials and how to use materials and processes
* measure, mark out, cut and shape a range of materials, and assemble, join and combine components and materials accurately
* use finishing techniques to strengthen and improve the appearance of their product, using a range of equipment including ICT
* follow safe procedures for food safety and hygiene.
 | **Make** * select from and use a wider range of tools and equipment to perform practical tasks, such as 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
 | No Change |
| **Evaluating processes and products**Pupils should be taught to:* reflect on the progress of their work as they design and make, identifying ways they could improve their products
* carry out appropriate tests before making any improvements
* recognise that the quality of a product depends on how well it is made and how well it meets its intended purpose
 | **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
 | No change |
| **Knowledge and understanding of materials and components**Pupils should be taught to:* how the working characteristics of materials affect the ways they are used
* how materials can be combined and mixed to create more useful properties
* how mechanisms can be used to make things move in different ways, using a range of equipment including an ICT control program
* how electrical circuits, including those with simple switches, can be used to achieve results that work.
 | **Technical knowledge** * apply their understanding of how to strengthen, stiffen and reinforce more complex structures
* understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages
* understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors
* apply their understanding of computing to programme, monitor and control their products.
 | No change |
| **Breadth of study*** investigating and evaluating a range of familiar products, thinking about how they work, how they are used and the views of the people who use them
* focused practical tasks that develop a range of techniques, skills, processes and knowledge
* design and make assignments using a range of materials, including electrical and mechanical components, food, mouldable materials, stiff and flexible sheet materials, and textiles.
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